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ABSTRACT

This monograph reviews the many efforts that have been made in the fields of education and vocational rehabilitation to develop and refine career preparation services for hearing-impaired individuals. The following papers are included in the volume: "Career Education: A Literature Review," by Charlene Dwyer; "A Current Profile of Career Education Programs," by Sue Ouellette and Charlene Dwyer; "A Dilemma: Who and What to Teach in Career Education Programs?" by Michael Bullis; and "Where Do We Go from Here?" by Michael Bullis. A directory of career education curricula used in State schools and postsecondary education, which was compiled by Roger Beach, is appended to the monograph. (MN)

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Career Education of Hearing-Impaired Students: A Review

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CAREER EDUCATION OF HEARING-IMPAIRED STUDENTS: A REVIEW

EDITED
BY

Michael Bullis
Douglas Watson

With contributions by Roger Beach, Michael Bullis, Charlene Dwyer and Sue Ouellette

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Preface

We are in an era of immense change. Our society is, quite literally, being reshaped by advances in technology. These alterations in the fabric of our world impact directly upon those individuals who are working, and upon those persons who are preparing to enter the labor force. Career preparation efforts on behalf of hearing-impaired persons, in education and vocational rehabilitation programs, must accommodate and respond to these fundamental changes taking place in the employment sector. It is probable that at no other time in history have the concepts of career education and career guidance been so sorely needed, or so important, to hearing-impaired persons.

This monograph reviews the many efforts which have been made to develop and refine career preparation services for hearing-impaired individuals. These efforts by education and vocational rehabilitation programs have initiated a forward momentum that must be maintained. It is our belief that this manuscript will contribute to that momentum. Moreover, it is our hope that the conceptual framework presented by this monograph will play a positive role in stimulating improved career education programming for hearing-impaired students.

M.B.
D.W.

1. EDITORIAL INTRODUCTION

The University of Arkansas Rehabilitation Research and Training Center on Deafness and Hearing Impairment (RT-31) was established in 1981 to conduct a five year research and training program on issues and problems in the habilitation/rehabilitation of deaf persons. The primary goal of RT-31 is to translate the knowledge and findings of its research investigations into tangible products for use by rehabilitation professionals. An extention of this objective calls for the dissemination of the information to service settings to aid rehabilitation effort on behalf of hearing-impaired persons.

In order to more clearly focus the research and dissemination efforts of RT-31, three core areas of research have been developed. These three domains comprise the heart of vocational rehabilitation services for deaf persons, especially for those who are considered to be severely disabled. The areas are: employment, vocational evaluation, and adjustment training services. Specific research studies are subsumed under each of these core areas.

An important component of employment efforts for deaf persons, and an integral research emphasis within the employment core area at RT-31, is career education. Indeed,

the career education and training of hearing-impaired persons may be the best method of combating problems of unemployment and underemployment that often plague this population. It was this thought that provided the impetus to write a monograph about career education.

It is safe to conclude that career training is a critically important aspect in the education and rehabilitation of deaf persons encompassing academic, social, vocational and independent living domains. Further, it is also obvious that the career education movement in the past two decades has been shaped through a social and educational upheaval guided by administrators, teachers, counselors, researchers, legislators, and consumers. Unfortunately, the breadth of content and intricacies of the field's growth pose distinct problems in conceptualizing just what career education is for the hearing-impaired student. It is not easy to say what career education is. Nor, is it easy to gain a clear understanding of the development and present status of the field.

The purpose of this monograph is to provide such clarification. Specifically, this document has been structured to highlight and review the past and the present of the career education field as it pertains to deafness. In addition, ideas on the future of career education for hearing-impaired persons will be presented. In the second Chapter, the history of the career education movement is described. The summarization provides a foundation from which to understand the growth of the field and lends insight to the present status of this educational mode. In the third Chapter, the results of a national survey on current practices in career education for hearing-impaired persons are presented. Thus, we are given an overview of the "state of the art" of the field. Chapter four describes one group's view of the career education needs of the hearing-impaired consumer and delineates methods through which these needs may be met. In Chapter five, a relatively new direction for the field of career education is discussed. This area relates to vocational decision-making training. Finally, Chapter six provides suggestions for future research efforts in the career education arena. The last part of this monograph, Appendix A, includes a directory of existing career education materials and programs that are available by deaf persons. This directory should serve as a valuable resource of curricula, relevant materials, and practices in the field.

2. CAREER EDUCATION: A LITERATURE REVIEW

Charlene Dwyer

Perhaps the most resonant criticism leveled against this country's educational system is that schools do not prepare students to enter the world of work. This same concern is often expressed with regard to disabled students, including those who are deaf. In response to this situation a growing career education movement has emerged in the field of deafness.

The purpose of this chapter is to provide an overview of the career education literature and bring some clarity to this field. The focus throughout is on the growth of career education in the schools and the movement's impact on professional thought and practice in the training and career development of deaf persons. Toward this end, background on the evolution of the career education movement is provided. A review of the career literature that pertains to the movement in the field of deafness is also presented.

Career Education: 1960-1975

In this section an overview of the development of career education between 1960-1975 will be presented. Specifically, the early roots of the movement is discussed, the genesis of career theory is described, and a brief history of career education is offered. The purpose of this treatise is to provide a foundation for the reader to better understand the career education movement for deaf students. Indeed, these critical developments must be grasped in order to gain an understanding of the dynamics that impacted upon the field of deafness and shaped the career education movement in that arena.

The Early Roots of Career Education

Most would agree that modern career education thought began to coalesce during the 1960's (Herr & Cramer, 1979; Hoyt, 1974, 1980; Hoyt, Evans, Mackin, & Garth, 1972; Marland, 1974; Reinhart, 1979). Essentially, career education efforts evolved to meet the perceived inadequacies of the educational system of that era (Hoyt, 1974). Examples of these problems are listed below:

1. Too many persons leaving the educational system were deficient in the basic academic skills required for adaptability in a rapidly changing society.

2. Too many students failed to see meaningful relationships between what they learned in school and what they did when they left the educational system.

3. In general, the American educational system was structured to meet the educational needs of college bound students.

4. American education was not keeping pace with the rapid change of the post-war industrial society.

5. Too many persons left the educational system at both the secondary and collegiate levels unequipped with the vocational skills, self-understanding, career decision-making skills, and work attitudes essential for a successful transition from school to work.

6. The growing presence of women in the work force was not reflected in either the educational nor in the career options typically offered to females in the educational system.

7. The growing needs on the part of adults for continuing and recurrent education were not being met by the systems of public education.

8. Insufficient attention was given to learning opportunities outside the structure of formal education programs.

9. The general public, including parents and the business-industry-labor community, was not given an adequate role in the formulation of educational policy.

10. The American education system was not meeting the needs of minority or economically disadvantaged persons.

As a result of these weaknesses and concurrent public pressure, federal legislation was passed in the 1960's to initiate educational reform. Specifically, the role of vocational education was expanded through the Vocational Education Act of 1963 and the Amendments of 1968. Reinhart (1979, p. 25) reports that this legislation "did much to break down the traditional programs of vocational education and laid the foundation for many of the structural elements of career education". Many of the exemplary vocational/career education programs and projects funded through these pieces of legislation became the forebearers of the present career education movement. Further, the findings of the research projects implemented in this era greatly increased the scope of knowledge on vocational preparation, placement and retention (Herr & Cramer, 1979).

Career Education Theory

While career education ideas were formulating amidst vocational education activity in the 1960's, vocational development theorists such as Super (1957, 1963, 1969), Holland, (1966), and Tiedman and O'Hara (1963) were being recognized for their contributions to career development theory. These theorists support the proposition that individuals address certain tasks within specific life stages.

Moreover, these tasks must be resolved successfully before a progression in the developmental ladder can be made.

Zaccaria (1965) provides a comprehensive list of the principles that underlie the developmental model that these theorists embrace. These principles include the concepts that an individual's growth is continuous and can be divided into life stages; that each life stage has characteristics common to most individuals in a give culture; and that society makes uniform demands which vary from stage to stage for all members of society. Developmental crises are said to occur when the individual perceives demands as altering present behavior, resulting in a movement from one stage to another. Each life stage, then, prepares the individual to meet developmental crises which occur during the following stage. Moreover, each developmental crisis must be dealt with before the individual can move on to the next developmental stage. Societal approval and reinforcement is, then, granted for successfully meeting each crisis or withheld for failure to develop appropriate behavior to meet the crisis.

As a result of this increased understanding of the career development process, a rational and systematic framework for the initiation of career education in the school setting evolved (Herr & Cramer, 1979; Hoyt, 1975b, 1978; Hoyt, et al., 1972; Reinhart, 1979). Hoyt (1978) notes that "both career education and career guidance use the career development process as a philosophical/research basis for their conceptual and implementation efforts" (p.1). The reader is referred to Herr and Cramer (1979) and Reinhart (1979) for a thorough review of career development views and the relationship of these paradigms to career education models and practices.

The Formal Introduction of Career Education

Many believe that the concept of career education can be traced to the time it was formally introduced in 1971 by the Commissioner of the United States Office of Education (USOE), Sidney Marland, (Herr & Cramer, 1979). Marland assumed an active role in the early days of the career education movement and is credited with coining the term "career education." He was also a leading advocate for career education ideas, obtaining widespread public endorsement of the concept as well as allocating discretionary funds to implement such programs (Clements, 1977; Herr & Cramer, 1979; Hoyt, et al., 1972; Reinhart, 1979).

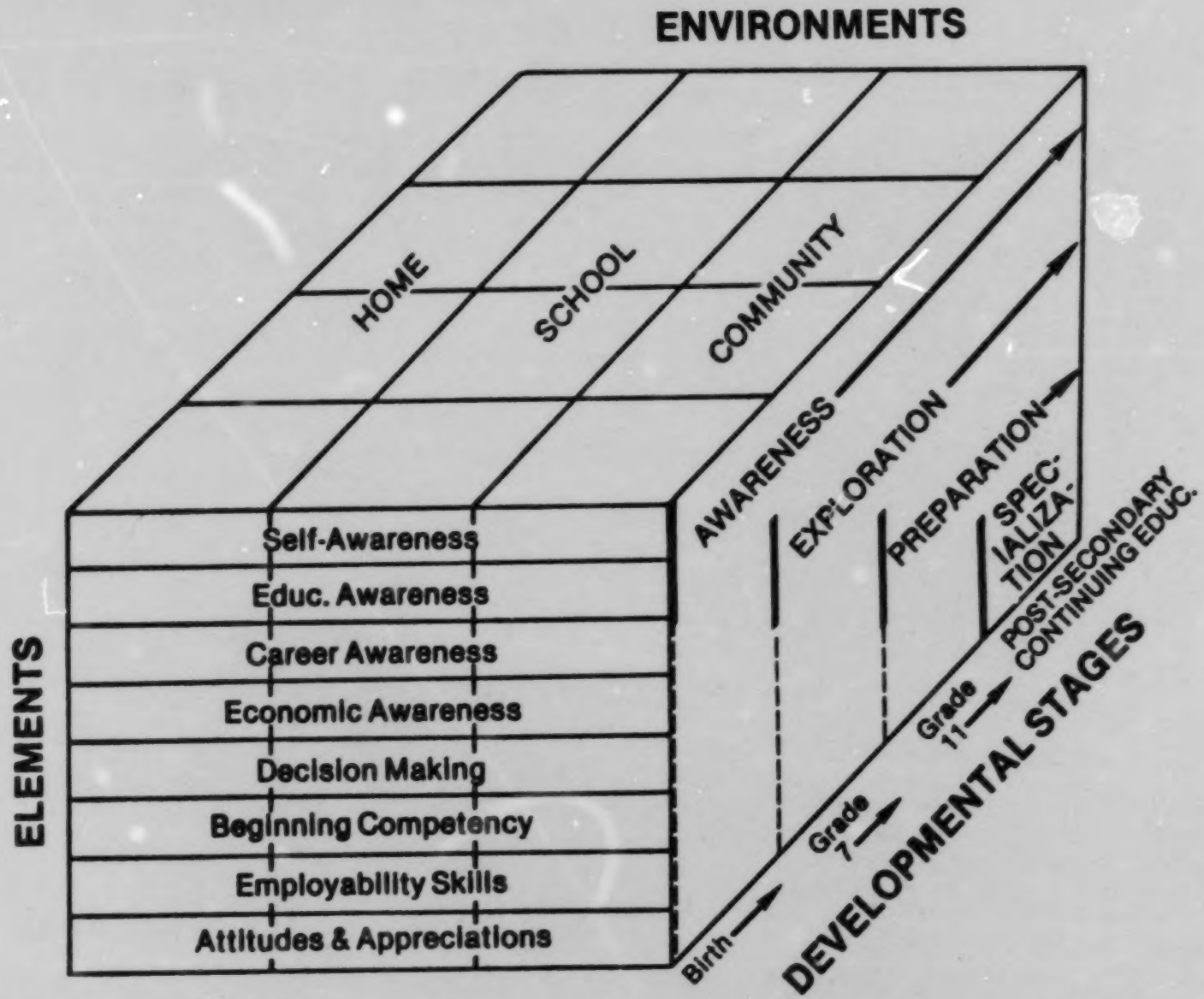
While Commissioner Marland proclaimed career education as the primary goal of the USOE, he purposefully did not provide a concrete definition of career education for the nation. He (1974, p. 84-85) stated:

> From the early stage of this endeavor, I held that the concept needed much national debate, much research, much scientific analysis, much testing of assumptions in real schools and classrooms before it could be given a dependable definition...I wanted very much to see it come into place as an evolutionary reform. But "evolutionary reform" --- or indeed educational change of any kind --- does not come about as a result of proclamation from Washington. In America the ultimate determination of what happens in elementary and secondary classrooms rests with the classroom teacher. American teachers do not take kindly to being told to change . . . Hence, we declined to declare a definition.

Because of this ambiguity, career education lacked direction in the early 1970's (Reinhart, 1979). The absence of a guiding definition led to the formation of a multitude of career education definitions. The field-generated efforts which arose from these definitions took many divergent paths. An exception to this confusion was the Comprehensive Career Education Model (CCEM) developed by Ohio State University. The Ohio State University Center for Vocational Education was awarded a grant to develop a school-based model that would serve as a prototype of career education delivery that could be adapted by school districts across the nation (Herr & Cramer, 1979). Critical analysis of the available literature and consultation with both practitioners and academicians resulted in the formation of the CCEM. This theoretical model is composed of eight outcomes and it is arranged on a continuum from kindergarten to twelfth grade. As will be pointed out later in this chapter, this model has been critically important to the conceptualization of career education thought in the habilitation of deaf people. A visual representation of the matrix is presented in Figure 1.

Place Figure 1 About Here

Despite this conceptual and legislative progress, many career education programs floundered due to limited



Trainers Manual: Career Education and Planning Skills.
MSSD/NTID National Project on Career Education, 1980.

funding. With the passing of the Education Amendments (P.L. 93-380) in 1974, however, a turning point in the career education movement was reached. Section 406 of the Amendments mandated the creation of a national Office of Career Education, and a National Advisory Committee on Career Education. In addition, the legislation authorized the expenditure of funds to further demonstrate and evaluate career education programs (Herr & Cramer, 1979; Reinhart, 1979). This legislative initiative, coupled with a commitment of resources, provided an impetus for the further growth of career education programs. As noted earlier, these historical developments helped to guide the growth of the career education movement in the field of deafness. This growth will be described next.

Career Education and Deafness

The goal of this section is to provide a review of career education literature related to the field of deafness. With this purpose in mind, three areas are discussed. First, an overview of the early period of the career education movement for the deaf population (1965-1970) is outlined. Second, a review of several research and demonstration projects that were initiated is provided. Finally, important developments since 1978 are discussed. In reading this section, it is important to remember that these efforts did not evolve in a vacuum and were affected by many of the events outlined in the previous section.

Career Education for Deaf Persons: The Beginning

During the 1960's and early 1970's efforts to construct a career education model for deaf persons were initiated. Overall, these projects corresponded closely with the career frameworks proposed by such theorists as Holland and Super. In line with this orientation, Gellman (1965) discussed several theories of career development at the National Research Conference of Behavioral Aspects of Deafness. In his remarks on the vocational growth of deaf persons, he identified three factors that may modify the developmental process for deaf individuals and result in an inadequate work orientation:

1. Perceptual differences which alter self perception and the perception of reality;

2. Restricted life-space which results in a decreased knowledge of and familiarity with areas outside of the immediate social or geographic environment including occupational experience and information; and

3. Sociocultural immobility that is expressed in rigidity, self-segregation, and fear of the unknown.

Gellman, recommended the following compensatory interventions for these acquired occupational deficits: career courses for occupational exploration, a combined work-study sequence beginning at an early grade, field trips and various work experiences, exposure to adult role models, the provision of career information, the relating of academic and work values, and counseling interventions. His remarks reflected the growing belief that career development and vocational behavior constituted complementary processes of growth and maturation occurring during the lifespan of the individual. Moreover, these processes were believed to be subject to modification by the individual's learning environment.

In 1970, the National Technical Institute for the Deaf hosted an institute on career development for deaf students. The objectives of the institute were (Lacey, 1973a, p.2):

1. To study the value of career education and occupational preparation in vocational planning for deaf students;

2. To develop familiarity with new concepts, models and techniques in career development for deaf students; and

3. To stimulate the application of these concepts, models and techniques in developing programs to orient deaf students to the world of work and to the expanding opportunities in the educational and labor market places.

During the institute, participants engaged in problem-solving tasks that related to career programs in their specific facility or school. In addition, general session

presenters addressed the issue of career development activities beginning with the elementary grades and continuing through high school (Campbell, 1973; Lacey, 1973b). It was strongly suggested that these activities should be woven - infused - into the educational curriculum and measured in behavioral performance terms. This infusion process is still considered to be the "sine qua non" of career education technology and may be defined as a "deliberate, continuous process that will eventually provide a career focus for the total curriculum" (Reinhart, 1979, p. 79).

Also, in 1970 a major study on career patterns was conducted by Lerman and Guilfoyle (1970). This project assessed the vocational development of deaf adolescents by evaluating changes in prevocational behavior with age as defined by Super's model (1957) of developmental tasks and life stages as major demarcation points. The patterns of vocational development among deaf subjects were then compared with patterns of selected hearing subjects. The population for the study included 340 deaf residential school students and a cohort of 55 hearing persons. The results indicated that the language and communication skills of deaf adolescents had bearing on their vocational information and planning skills, as does the degree of stimulation present in their home environment. Intelligence and independence were also found to be factors impacting upon prevocational behaviors. The authors concluded that progress in vocational training practices had little impact on prevocational behaviors and that "schools, homes and rehabilitation services must develop channels and methods for increasing vocational information, changing attitudes, and developing individual potentials, particularly at an early age" (p. 6).

The Evolution of Career Education

Between 1971 and 1978, the advancement of career education thought in the education of hearing-impaired students was reflected by various nation-wide projects. Significant papers, professional meetings, publications, and model career education events are highlighted in the following paragraphs.

The CREED Project. One of the most prominent early career education efforts for deaf persons was initiated in 1971. This effort involved 12 school programs for deaf students

in New York state that combined resources in a three-year demonstration project entitled: Cooperative Research Endeavors in the Education of the Deaf (CREED). The aim of this project was to develop a secondary level career education program model for hearing-handicapped students. The CREED project staff members constructed career education activities in the classroom and created career education materials for use in this effort (Munson, Egelston & Phillips, 1975). This project resulted in the formulation of a comprehensive career education program model for schools for deaf students.

The project was guided by a theoretical base composed of four channels - or means - that facilitate the career development process. Briefly these channels were (Munson, et al., 1975):

1. The Self Channel: educational exposures designed to enhance the development of an adequate self-concept in relation to work,

2. The Conceptual Channel: experiences here contribute to the individual's general understanding of the nature of work, work orientation, and work roles and emphasize the development of attitudes and understandings that permit one to think abstractly about the role of work in life,

3. The Information Channel: provisions are made to provide factual information about occupational environments and opportunities to aid in decision making, and

4. The Experiential Channel: the opportunity to test feelings about and behavior in work roles and work role relationships, either simulated or real, is provided.

Five basic career education components or vehicles were designed to access four career development channels: vocational gaming, making field trips, learning about work functions, using career information, and clarifying work values and attitudes. Instructional materials were then developed in each of these areas for use with deaf students. The major thrust of the career education program took place in the classroom.

Project CREED was one of the earliest and most sophisticated efforts to address the career development

needs of deaf students and to design instructional activities that related to a specific model of career development. Although designed independently, the CREED paradigm and educational products corresponded closely to the concurrent efforts of the Ohio State Center for Vocational Education (CVE) staff on the development of the national school-based model. CREED was introduced to educators of deaf students across the nation through national conferences and professional journals (Egelston, 1975; Egelston-Dodd, 1977a; Munson, Hoag & Howard, 1973; Munson et al., 1975; Munson & Egelston, 1975; Munson, 1979).

The CCEM Model in Deafness. This project was closely related to the Comprehensive Career Education Model (CCEM) (refer to Figure I). Between 1973 and 1976, the Arizona Department of Education completed three revisions of the CCEM Matrix with feedback solicited from the State's educators and community members. By the summer of 1976, the final product, "The Arizona Career Education Matrix", was made available to local education agencies by the State Department of Education. It is this model that has been selected by leaders in the field of deafness rehabilitation and education to address the career education needs of deaf students and clients (Egelston-Dodd, 1980; Gallaudet College, 1982; Galloway, 1979).

The MSSD/CVE Project. In 1975, the Model Secondary School for the Deaf (MSSD) at Gallaudet entered into a contractual agreement with the Center for Vocational Education (CVE) at Ohio State University for the purpose of developing, evaluating and implementing four programs in career education (Fitch, 1975; Galloway, 1979; Steffan, 1975). The focus of these programs was to:

1. Design and implement an orientation to career education for staff development programs;

2. Develop a curriculum unit project designed to adapt and field-test 20 CVE curriculum units with secondary hearing-impaired students;

3. Implement a career planning system at MSSD to assist students in aquiring and using information about themselves and occupations that is central in career decision making, to aid students in the development of inquiry and problem-solving skills, and to foster student responsibility for career planning; and

4. Develop guidelines for career education programming at MSSD.

A by-product of the affiliation between the Ohio State CVE and MSSD was the publication of a Resource Guide for Career Education (Johnson & Newman, 1978). This guide is "an extensive media analysis of the materials which are available at the Kendall Demonstration Elementary School for the Hearing-Impaired...those materials which can be used to infuse career education concepts into the classroom by correlation with the eight elements of the CCEM model are listed." (Cobb & Egbert, 1981, p. 95).

National Surveys of Career Education in Deafness. Results of two surveys conducted during this time period made it readily apparent that career education was not occurring in isolated instances. Instead, the movement was gathering a strong grass roots commitment and was being embraced by many practitioners. Gannon & Gilbert, (1976) assessed how the concept of career development was being integrated into schools for the deaf. A questionnaire was sent to the superintendents of 56 residential schools across the country. The results of the survey revealed an increasing awareness of career development concepts on the part of the schools, and numerous attempts to introduce residential students to the world of work. In addition, it was found that deaf students, from kindergarten to high school, were being oriented to a wide range of career possibilities.

The results of a second survey of residential schools for the deaf were reported by Twyman & Ouellette (1978). Drawing from the work by the Ohio State CVE, the authors expanded upon a questionnaire designed by Lacey (1971) to investigate whether a broader perspective of career education theory and practice had evolved since that initial study. The results indicated that overall, career education programs in residential schools for deaf persons were well established. The objectives established by the schools centered around self-awareness, social adjustment skills, and awareness of the multi-faceted world of work. The training methods were largely school-designed and experiential in nature, and classroom teachers were cited as the most widely used personnel in these programs. Non-skilled or semi-skilled technical, trade and industrial programs, were cited as the vocational training areas most frequently considered by deaf residential students. Finally, limited occupational knowledge, academic success, and work opportunities were recognized by respondents as the factors which most affect the career aspirations of residential students.

1978 Until Now: An Era of Leadership

In response to numerous requests by schools for the deaf regarding the implementation of career education, two national working conferences were jointly sponsored by MSSD and NTID during February and September, 1978. The conferences on Career Development for the Hearing-Impaired, were held in Washington, D.C. (February) and Rochester, New York (September). Invited to the first conference were residential school personnel with experience in career education. The second working conference was planned specifically for day and mainstream programs in the public schools. The objectives of both meetings were to:

1. define career education as related to hearing-impaired individuals,

2. create awareness of career education trends for hearing-impaired individuals, and

3. describe future priorities for career education for hearing-impaired individuals (Updegraff, Bishop, Steffan, & Egelston-Dodd, 1979, p. 1).

Hoyt (1979) delivered the keynote address at the first conference on the obstacles and opportunities in career education. He commented that "the promise of career education remains much more evident than does its effective delivery" (p. 4). Galloway (1979) furnished the keynote address at the second conference, on the relevance of career education for hearing-impaired individuals. He stated that there must be interventions to counteract the occupational stereotyping and discrimination which deaf students encounter, and that career education comprises an appropriate intervention program for the remediation of these problems (Updegraff, et al., 1979). Conference participants also generated and ranked specific issues related to the successful implementation of career education programs for hearing-impaired individuals. The results indicated that in-service training for staff and a comprehensive plan for implementing career education goals were both considered very important to this effort.

In addition, other significant strides were being taken during this time period. Several of these efforts are discussed below.

The NPCE Project. The National Project on Career Education (NPCE) evolved as an extension of the joint efforts and

mutual interest of MSSD and NTID in career education. Joint funding was established by the two institutions to provide staffing for a four-year project. The immediate goal of this effort was to provide in-service training in career education to educators working with hearing-impaired students. The NPCE's long-range goal was to assist each state in developing a model career education program and a cadre of career education facilitators. It was proposed that NPCE-trained professionals would then assist personnel in schools serving hearing-impaired students to develop and implement plans for a comprehensive K-12 career education program and to infuse career education concepts into the school curriculum (Young, Lutz, Lichty & Egelston-Dodd, 1980). The conceptual model of career education program implementation adopted for this endeavor was the CCEM as developed by the Ohio State Center for Vocational Education and adapted by the Arizona State Department of Education (1978).

In-service training for staff, the most urgent issue identified by participants of the two MSSD and NTID conferences, was addressed by the NPCE team through the development of a national network of 60 schools. Local career education facilitators and a team of four professionals per participating school were trained by the NPCE staff in eight regional workshops held during 1979 and 1980. In addition, the NPCE Trainer's Manual (Egelston-Dodd, 1980) and a media package were supplied to each local team for their use in providing in-service training to school personnel in their state.

Next, the NPCE project provided on-going follow-up services for the states involved in the project (Egelston-Dodd, Young, Lichty, Lutz & Cobb, in press; Updegraff & Egelston-Dodd, 1982). Continued support and assistance were offered in the forms of: 1) on-site consultation to member schools, 2) design of media products to meet the more universal needs of the schools, 3) parent development workshops, and 4) a NPCE newsletter.

Two of the exemplary NPCE media products designed for use by local teams were: 1) Catalyst: Handbook of Existing Career Education Programs and Facilitators (Cobb & Egbert, 1981) and 2) A Career Education Biblography: Annotation of Studies and Programs for Handicapped Americans (Cobb and Egbert, 1981). The Catalyst handbook provides data on resources (people and products) that are available to assist states to implement a local, comprehensive career education program. A list of trained NPCE facilitators and team members is provided along with a

national directory of schools which provide career education programs for deaf persons. A revised version of the handbook includes updated information from a new survey of existing career education programs (Egelston-Dodd, Young, Lichty, Lutz, & Cobb, in press). The Career Education Bibliography provides over 180 annotations to assist the reader in locating research reports, materials, documents, guidelines, and models related to career education for handicapped persons. This bibliography is being updated.

The CEASD Position Statement. In 1980, the Conference of Executives of American Schools for the Deaf (CEASD) developed a position paper on career education. The paper states that "it is the official position of the CEASD that career education must be a comprehensive and appropriately infused part of every educational program serving hearing-impaired students" (Bishop, Galloway, Hicks, Updegraff, Lauritsen & Wykes, 1980, p. 1). While CEASD did not endorse any specific model for the implementation of career education efforts, the organization advised that hearing-impaired students:

a) develop an appreciation of their own values and the values of work,

b) become oriented to the concept of careers,

c) explore vocations and occupations,

d) learn to assess their strengths and weaknesses realistically,

e) be prepared to make sound, reasonable decisions, and

f) be prepared to enter an occupation commensurate with their abilities and interests (Bishop et al., 1980, p. 1).

Further, CEASD maintained that, if "deaf people are to enjoy economic parity and personal satisfaction as members of society, they must be better prepared through experience in the schools, in the homes, and/or in the communities" (Bishop et al., 1980, p. 3). In this document, key terms are defined and several concepts essential to understanding the philosophy behind career education (e.g., the relationship between career education, occupational education, and vocational education) are delineated. Finally, the top priorities for implementation of career education programs identified at the two national working conferences held in

1978 (i.e., in-service training for staff and plans for implementing a comprehensive career education program in schools) are reiterated. The paper closes with a challenge to schools and programs serving deaf students to develop services that meet the career development needs of these persons. In sum, a significant commitment was made to the career education of deaf people.

Rehabilitation Career Education Research Projects. In 1982, the Research and Training Center on Deafness and Hearing Impairment at the University of Arkansas established a four-year programmatic research project aimed at career education programs for hearing-impaired adolescents and adults. The long range goals of this project are to:

1) research the utility of the techniques, materials and procedures of programmatic career education models in use with selected hearing-impaired rehabilitation client groups,

2) package those materials of demonstrated utility for distribution, and

3) publish and disseminate career education interventions and materials that are demonstrated to be effective for use with hearing-impaired rehabilitation clients (University of Arkansas, 1982).

The initial phases of this project are under way and a national survey of career education materials and procedures used with deaf persons has been completed. The results of this survey are discussed in Chapter three. The research study is addressed in Chapters four and five of this monograph.

The CASP Project. A cooperative effort between Gallaudet College and the National Technical Institute for the Deaf, entitled Career Awareness Summer Program (CASP), was sponsored and funded for 1983. As an extension of the National Project of Career Education (NPCE), CASP addresses the career education needs of secondary deaf students in their sophomore summer with a one-week career education "add-on" program of activities related to career awareness, exploration, and decision making. The CASP program also includes a NPCE parent career education workshop with the objective of assisting parents of hearing-impaired children become involved with the facilitation of their child's career development (O'Brien, Egelston-Dodd & LeNard, 1983).

These research and organizational efforts represent the current state-of-the-art in the evolving career education movement for deaf persons. The following summary provides an overview of the events that occurred during the past two decades and identifies important themes that have emerged from the numerous activities and professional thought during this period. In addition, important points for further research will be described.

Present Status - Future Directions

The growth of the career education movement in the field of deafness has paralleled that of the national career education movement. As the concepts of career development and career education evolved, numerous workshops, training seminars, conferences, position papers, and journal articles were devoted to the topic. Of special interest was the frequent discussion and dissemination of information on career education/development models and ideas. Surveys of career education philosophies and practices in schools for the deaf (Lacey, 1971; Twyman & Ouellette, 1978) revealed that many consider vocational education and career education as two necessary but different approaches to meeting the goal of education as preparation for work. The studies also document the recurring priority for a clear model of career education to be established to guide the construction of educational goals and objectives. Only through the adoption and implementation of such a structure can career education theory translate into classroom practice. The model of career education that has received the greatest support for use with deaf students is the multi-dimensional CCEM developed by the Center for Vocational Education at Ohio State University and adapted by the Arizona State Department of Education.

To successfully adopt and institute this model of career education within a school system, the in-service training of staff is considered essential (Bishop et al., 1980; Egelston-Dodd, 1980; Updegraff et al., 1979; Updegraff & Egelston-Dodd, 1982). Several projects have been implemented on a national basis to provide such training. The need for appropriate career education classroom materials has been cited as a high priority by

educators of hearing-impaired students (Bishop et al., 1980; Prickett & Hunt, 1977; Propp, 1973; Updegraff, et al., 1979). Efforts have also been directed to the development of such materials.

Over the years, several collaborative projects on the state and national levels have facilitated the career education movement for deaf students in school settings (e.g., Project CREED, the NPCE joint endeavor, and the MSSD-Ohio State CVE curriculum development project). In implementing career education strategies, the emphasis has been on the infusion of career education concepts into the regular classroom and vocational training curriculum. In a school-based model, this process would begin, ideally, at an early grade and continue through high school. In addition, the goals and objectives of career education classroom and guidance efforts would be tied to a developmental model of career maturation. The CCEM provides a well-accepted framework for such implementation.

In summary, career education projects designed for deaf students have been subject to increased attention. National conferences and professional groups have addressed key issues. The definitions, paradigms, and practices associated with the topics of career education and career development have become more sophisticated and pragmatic. However, deficits in the service network persist. We've come a long way, but we also have a long way to go. The continued development of career education becomes imperative for all educators and rehabilitation personnel who believe that the "freedom to choose -- and to change -- one's occupational choices are among the most sacred of all freedoms available to our citizens," (Hoyt, 1980, p. 185). Moreover, career education provides a potentially powerful weapon to combat unemployment and underemployment and to better prepare deaf persons to "... enjoy economic parity and personal satisfaction as members of society," (Bishop et al., 1980, p. 3). It is not a panacea, but career education can be an effective tool in removing existing barriers to career equality for deaf persons in today's society.

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3. A CURRENT PROFILE OF CAREER EDUCATION PROGRAMS

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Charlene Dwyer

During the past 15 years periodic surveys of career education (CE) programs for deaf students have been conducted to assess the status and growth of the discipline. The results of these surveys provide a statistical and descriptive profile of the career education movement at large. Further, the results of these research studies help to delineate the parameters and the impact of education services for deaf persons. The purpose of this chapter is to: 1) review the results and implications of surveys conducted between 1970 and 1978, and 2) report the results of a 1983 national survey of career education programs serving deaf people.

Findings of Past Surveys

Since 1970, three comprehensive surveys of career education programs for deaf persons have been conducted. Each of these surveys is discussed in this section.

Lacey

The first survey of existing and projected career development services in residential schools was conducted in 1970 (Lacey, 1973). In this study, career development services were defined to include: vocational instructional programs, vocational counseling, vocational evaluation, referral services and educational/occupational placement throughout the country. A questionnaire was constructed around these categories and utilized as the primary research tool. Superintendents of 53 residential schools for the deaf responded to the survey.

Analysis of the results revealed a strong trend toward providing vocational instructional programs as a component of the residential school and to refer deaf graduates to other secondary or postsecondary educational settings for academic training. It was found that 94.5% of the 1970 graduates from these schools participated in vocational training programs. With regard to this emphasis, 75% of the superintendents reported the development of healthy work attitudes in conjunction with sound technical skills as the primary programmatic concern. A striking finding was the relatively low priority given to vocational counseling, evaluation services, and placement of graduates in work settings. Such services were generally not provided or received only minimal attention. Finally, it was found that the bulk of career education efforts by these programs were devoted to vocational activities that focused on semi-skilled or skilled trades.

Asked to project career development services for the period 1971-1976, school superintendents indicated an interest in establishing and developing employer outreach programs, vocational counseling services, and occupational interests and attitudes testing. They indicated that the primary need was training programs designed to prepare vocational teachers and vocational counselors to serve deaf students in residential schools.

While this survey was pioneering and highly illuminating, the focus of this project closely reflected vocational education rather than career development concerns. Thus, the results of this survey documented the vocational education practices and philosophy of the 1960's while predicting the career education emphasis of the 1970's.

Gannon and Gilbert

The second major survey of career education programs for hearing-impaired persons was conducted by Gannon and Gilbert (1976). The focus of this study was again on residential schools for the deaf. Forty-two residential schools for the deaf participated in this study.

Of the respondents, 79% reported that their school offered some type of work-study program. Moreover, the majority of the responding schools provided a comprehensive career education program that included an extensive vocational exploration component. In conjunction with this orientation, it was indicated that career resource materials and staff members responsible for career counseling were available at the bulk of the schools surveyed. At several of the institutions, however, the state vocational rehabilitation counselor was cited as the person responsible for the career counseling function. Finally, an overview of the vocational training programs provided by the schools showed an emphasis on training students for semi-skilled and skilled occupations. This was consistent with the results of Lacey's (1973) study.

Finally, it should be noted that while many of the responding schools were involved with the provision of career education services, few schools had fully functioning K-12 programs. Several schools reported plans for initiating multi-faceted programs beginning in the early school years and continuing through graduation.

Twyman and Ouellette

Drawing from Lacey's (1971) earlier study, a third survey was conducted by Twyman and Ouellette (1978). This investigation differed from the earlier surveys in that it was designed to ascertain what approaches to career education were employed in residential schools for the deaf. Forty-one schools participated in this survey.

The results indicated that 34 of the 41 schools had a career education program with the infusion model generally used. Further, 70% of these programs reported the introduction of career education activities sometime during the

K-8 years. The primary objectives of these programs included fostering self-exploration, teaching decision-making skills, and familiarizing students with the world of work. The concept of focusing on self-concept and/or self-exploration was viewed as an important goal of 94% of these programs. In this same vein, self-awareness and self-exploration were ranked by respondents as the greatest special needs of deaf students.

The classroom teacher was identified as the person most often responsible for implementing the career education program. Further, although commercially available career education packages were employed at a number of schools, self-designed materials were used by most of the schools surveyed.

When asked about the environmental factors affecting the career aspirations of deaf students, educators cited limited occupational knowledge, available work opportunities, and academic success as the strongest influences. Technical, trade, and industrial programs were most often noted as the types of occupations that residential students consider when seeking further training.

Summary

The results of these three surveys demonstrate the growth of career education programs in residential schools for the deaf. It is clear that the infusion model grew in popularity and became the preferred implementation vehicle for career education programming. Perhaps the most important shift identified was the movement from a skills training approach to one that embraced the notions of self-concept, self-awareness, and self-exploration. It is important to realize that the postsecondary educational projections for deaf students continued to emphasize the traditional semi-skilled and skilled trades.

Career Education for Deaf Students: A Current Perspective

Some 13 years after the dissemination of the first survey on career development services for deaf youth (Lacey, 1973), the University of Arkansas' Rehabilitation Research

and Training Center on Deafness and Hearing Impairment (RT-31) conducted a broader, more comprehensive survey of career education services available for deaf youths and adults. In addition to surveying day school programs and residential programs (to which previous surveys were limited), the RT-31 study also included stratified samples of postsecondary and rehabilitation programs serving deaf adults. This section of the chapter describes the questionnaire, research methods, and results of the RT-31 study.

Survey Questionnaire

In addition to selected questions from the Lacey (1973) and Twyman & Ouellette (1978) questionnaires, this study incorporated the 9 elements of the Comprehensive Career Education Model (CCEM) and the 13 occupational clusters developed by the U.S. Department of Labor. The questionnaire consisted of 50 items designed to assess: (1) the provision of career education services, (2) philosophical orientation toward career education with deaf persons, and (3) the perceived career education needs of this population. Moreover, the instrument was designed to delineate actual services provided, educational strategies employed, staff responsibilities for providing services, educational materials used, and assessment techniques employed. Respondents were also asked to rank: 1) environmental factors that they perceived to influence the career aspirations of deaf people, 2) the occupational clusters that most deaf people consider entering, 3) the types of educational or vocational training that their students/clients pursue, and 4) the areas of career adjustment in which deaf people experience difficulty.

Method

The survey and a cover letter were mailed to 327 day-school and postsecondary programs, rehabilitation and community service programs and residential schools for deaf people. Subsets of the survey population included: 91 rehabilitation or community service programs, 77 postsecondary educational settings, 73 residential school programs, and 86 day-school programs. Samples of the rehabilitation, postsecondary, and residential programs were drawn from the

April, 1982 directory issue of the American Annals of the Deaf. The day-school sample was selected with the assistance of the Office of Demographic Studies at Gallaudet College. This particular subset included day-school programs serving 50 or more hearing-impaired students which also have a secondary-level program. Follow-up postcards and telephone calls were used with non-respondents and those who provided incomplete responses.

Results

Table 1 presents the response rates for this study. The response rate varied from 44% to 64% for the four stratified sub-samples. An overall response rate of 54% was realized for the study. Review of the response rates reveals no discernable pattern. Therefore, it would seem that the sample included in this study is representative of the total population of schools and facilities serving deaf people.

Insert Table 1 About Here

Status and Goals of Career Education Programs. Of the 177 programs responding to the survey, 62% (n=109) provided formal career education services while 34% (n=61) did not. Some of the responses (n=7) were unclear as to whether or not career education services were provided. Of those programs providing career education services, the average number of deaf persons served annually was 87 with a mode of 50 and a median of 45. The number of clients served ranged from 5 to 560. Of the 61 programs that did not provide career education services, 36% (n=21) were planning to initiate such services in the future.

The primary goals of the career education programs ranged from developing career and self-awareness, to assisting with career planning and decision making, to actually preparing clients or students to enter employment. Of those programs providing career education services, 92% (n=106) reported that the ideals represented by the CCEM model of "self-concept" and/or "self-exploration" (i.e. addressing personal issues as they relate to making informed self-directed career and life choices) are viable goals for a career education program.

Respondents ranked the eight elements of the CCEM model, and a ninth category of job seeking skills, in terms of the career education needs of deaf persons. Table 2 presents the results of this ranking. Career awareness was identified as the most significant training need. In addition to the nine choices presented for ranking, residential school respondents ranked job retention skills, work experience, and self management as major needs of deaf students. Postsecondary respondents identified needs for vocational assessment, social skills/awareness, communication, and computer literacy. Respondents from rehabilitation and community service programs prioritized goal setting, communication skills, and job assertiveness as the major career education needs of their deaf clients.

Insert Table 2 About Here

Respondents were also asked to indicate the percentage of time their programs spent in providing specific kinds of career education services. Table 3 reveals that most time was spent in the areas considered most important such as career awareness and self-awareness training. Other areas in which respondents spent a majority of their time were: job assertiveness, communication, and goal-setting (rehabilitation/community service respondents), job retention skills, self-management, work experience (residential school respondents), social skills/awareness, communication, computer literacy, and psychological awareness (postsecondary respondents).

Insert Table 3 About Here

Description of Programs. Table 4 provides an overview of the manner in which career education services were provided by the survey participants. Respondents identified individual counseling as the most important strategy for providing career education services, whereas group counseling was seen as least effective. It is interesting to note that the infusion approach was incorporated into most academic courses and was ranked third in importance. Other approaches that were identified included: workshops, field trips, interviews, and summer orientation.

Insert Table 4 About Here

A majority (53.1%) of the programs providing career education services indicated that such training was required of all deaf persons attending their program. Some 15% of these programs provided career training services most often upon recommendation of counselors. Less than 10% of the respondents stated that career education services are initiated most often on the basis of elective classes (3.5%), self-referral (8.0%), and recommendations of instructors (4.4%). Finally, 15% of the programs used other sources to initiate career education services; including recommendations of the vocational evaluator or rehabilitation counselor (rehabilitation/community service respondents) and individualized educational plans (day and residential school respondents). Table 5 presents an overview of the manner in which this type of training was initiated.

Insert Table 5 About Here

Respondents were also asked to identify the point in time that students could access formal career education services. Of the residential school respondents 15.6% (n=5) indicated that services began in pre-school or kindergarten and continued throughout the student's academic program, 25.0% (n=8) reported initiating career education services at the elementary level, 18.7% (n=6) at the junior high school level, and 40.6% (n=13) at the high school level. Of the responding day-school programs, 25.0% (n=6) began career education at the pre-school or kindergarten level and continued throughout the academic program, 8.3% (n=2) initiated such services at the elementary level, 29.2% (n=7) at the junior high school level, and 37.5% (n=) at the high school level.

Responses to this question by both day-school and residential programs indicated that many schools were in the process of implementing career education programs at earlier ages and that future plans call for an infusion-oriented approach. Respondents also indicated an attempt to tailor the onset of career education services to the individual student's needs rather than mandating a required point in time for all students to receive such services. Respondents from postsecondary educational settings and rehabilitation/community service programs reported that career education services were available, most often from the time of intake or enrollment or immediately following an initial evaluation.

Table 6 identifies the types of personnel who were most often responsible for providing career education services

in the responding programs. Table 7 provides a summary of the amount of time these different groups devoted to career education programming.

Insert Table 6 About Here

Insert Table 7 About Here

General instructional staff were assigned responsibility for providing career education services in 67.9% of the programs. Program counseling staff were assigned responsibility for career education activities in 62.4% of the programs, whereas 52.3% assigned responsibility to a career education specialist, 44.7% to a vocational rehabilitation counselor, 20.2% to some other staff member, and 24.7% to outside consultants. Other staff members identified as being involved in the programs included vocational or work coordinators (day and residential schools), job placement counselors and job developers (residential schools), vocational evaluators, administrators, placement staff, and rehabilitation instructors (rehabilitation/community service programs), and vocational counselors and independent living skills instructors (postsecondary programs). The notion that program counseling staff, general instructional staff, and vocational rehabilitation counselors all spend a substantial percentage of their time in the provision of career education-related services was supported by this data. Finally, as one would expect, in those instances (52.3%) where a career education specialist is employed the specialist spent most of their time (58.6%) providing career education services.

Curriculum and Assessment Materials. Respondents indicated that materials designed by their own programs were the most effective training option for career education. This option was followed in importance by purchased packages and packages recommended by state administrators/school administrators (Table 8). Additionally, respondents reported wide use of materials specifically designed for, or adapted for, deaf students by Gallaudet College and/or the National Technical Institute for the Deaf. Purchased curriculum and assessment packages used include commercial work evaluation systems (particularly the Singer and Valpar systems), standardized vocational interest test (i.e. the Wide Range Interest and Opinion Test), computerized job search systems, and published career education packages.

Insert Table 8 About Here

Respondents were asked whether or not their programs attempted to measure career development (i.e. growth or change) in their students and clients. Of the respondents, 78 (67.8%) indicated that their programs engaged in such assessment, while 37 programs (32.2%) did not. Table 9 presents the mean rankings for six types of measurement strategies. Of the programs that had such measurement components, structured counseling interviews were cited as the most effective measuring tool. It is interesting to note that standardized assessment instruments were considered to be far less effective than agency or self-designed instruments; perhaps indicating the difficulty experienced in adapting existing instruments for use with deaf persons.

Insert Table 9 About Here

Most programs (95.6%) indicated that they attempted to assess the career/vocational interests of the deaf persons they serve. The results presented in Table 10 reveal that counseling approaches, or eliciting the interests of deaf clients/students, was considered to be more effective than highly structured or standardized approaches. Additional comments offered by respondents to this item stressed "hands on" experiences, classroom discussions, and student responses as helpful indicators of vocational interest.

Insert Table 10 About Here

Opinions and Attitudes. In the final section of the survey, respondents were asked to comment on several general questions regarding the career development of deaf persons. First, respondents were asked to rank a group of environmental factors in terms of the perceived effect the factors have on the career aspirations of deaf persons. This information is presented in Table 11. Respondents indicated that limited occupational knowledge and training towards a specific vocational goal were the two factors most likely to influence vocational choice. Conversely, the actual severity of the deaf person's disability and the presence of multiple disabilities were not perceived as major determinants of vocational choice. It appears, then,

that developmental and environmental factors were perceived as more significant determinants of vocational choice than were disability-related factors.

Insert Table 11 About Here

When asked to indicate occupational clusters clients/students were most likely to enter, respondents identified industrial production and related occupations (e.g., machining, assemblers, printing, and welding) and office occupations (e.g., clerical, computer, banking, and insurance) as vocations most likely to be selected. Table 12 illustrates that respondents perceived that the deaf people they work with were more likely to enter the traditional skilled or semi-skilled trades and occupations, rather than the emerging scientific and technical fields.

Insert Table 12 About Here

It was also asked if clients/students would seek additional training after completing their present program. Table 13 presents this information. Fifty-nine respondents (38.8%) felt that most of their clients/students would not pursue additional training, 36.2% felt additional training was a commonly sought option, and 21.7% found it to be a less-often sought option. Of those clients/students who would seek additional training, it was felt that on-the-job training and professional degrees would be the most often sought educational alternatives.

Insert Table 13 About Here

Next, participants identified those areas of "career adjustment" that they judged to be most problematic for the deaf people they worked with. Table 14 shows that respondents found the area of career choice and planning (i.e. assessing what one has already accomplished and what he or she would like to do) to be the area in which their students/clients were most likely to experience difficulty. Work habits and attitudes (i.e., demonstrating discipline on the job, being on time, having attitudes conducive to high quality or high level performance) were also rated as a major area of potential difficulty.

Insert Table 14 About Here

Finally, the programs were asked whether or not any changes were planned that would offer more or fewer career education programs or services for deaf persons. The majority of respondents (52.8%, n=85) indicated that such changes were, indeed, planned. Although the direction of change (i.e., more or less career education related services) cannot be determined from the responses, it is evident that current career education efforts for deaf persons are dynamic and that much activity is occurring in this area.

Summary

Several important trends in career education services for deaf persons can be noted from the data supplied by this survey. First, the career development approach espoused by the CCEM and other models appeared to be widely accepted by schools, postsecondary educational programs, and rehabilitation/community service programs for deaf persons. Second, the ideals of self-concept development and self-exploration as the primary goals of career education appeared to have replaced the early emphasis on vocational education. This shift was underscored by the fact that career awareness and self-awareness were identified as the major career education needs of deaf persons, outranking such traditional concerns as employability and job-seeking skills. Moreover, it was noted that the majority of time spent by professionals in the provision of career education was allocated to increasing career awareness.

With regard to the strategies and materials involved in providing career education services, individual counseling was cited as the most widely used training strategy. Career education services appeared to be reaching almost all deaf students/clients enrolled in the responding programs and such services were usually required of all deaf persons in the program. These services also seemed to be offered earlier in the student's school experience by both day and residential schools than noted in either of the three previous studies. However, 40.6% of residential schools and 37.5% of day schools deferred formal career education efforts until high school. Comments by the survey respondents in this area indicate that this situation is changing in favor of an earlier introduction of career education training and an individualized plan of services. Both postsecondary programs and rehabilitation/community

service facilities attempted to make career education services available to students/clients at the earliest possible opportunity following enrollment.

The general acceptance of the infusion model as a career education option was also evident in data regarding staff responsibilities for provision of such training. In most programs, general instructional staff bore the primary responsibility for such services, a finding similar to that presented by the Twyman and Ouellette (1978) study. However, an increase in the number of career education specialists was noted in the current study with 52.3% of the respondents indicating that specialists were involved in the programs which they represent.

The preference for self-designed career education instructional and assessment materials, noted by Twyman and Ouellette (1978), appeared to continue. A wide variety of purchased materials is available, however, some materials may be difficult to adapt for use with deaf persons. Finally, an increased trend in measuring career growth and development and in assessing vocational interests was evident.

As in the three previous surveys, semi-skilled and skilled trade and industrial occupations were identified as the fields in which deaf persons in the responding programs were most likely to enter or seek additional training. While some deaf students/clients were reported to be probable candidates for continued vocational training, an almost equal proportion were not. Limited vocational knowledge and success in specific training areas were identified as the greatest determinants of vocational choice of deaf persons, surpassing the effects of the disability itself. The most serious career education needs of deaf persons were identified as career choice and planning (i.e., assessing what one has already accomplished and what he or she would like to do) and achieving appropriate work habits and attitudes.

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TABLE 1

Survey Response Rates by Type of Agency

Agency Type	N	Completed Questionnaires Received	Not Received	Response Rate
Residential Schools	73	43	30	.59
Day Schools	86	38	49	.44
Postsecondary Programs	77	49	28	.64
Rehab/Community Services	91	47	44	.52
TOTAL	327	177	151	.54

TABLE 2

Ratings of Career Educational Needs of Deaf Persons

Career Educational Service	N	Very High Priority		Substantial Priority		Moderate Priority		Low Priority		Not a Priority		Mean Rating
		N	%	N	%	N	%	N	%	N	%	
Career Awareness	113	75	66.4	32	28.3	4	3.5	2	1.1	--	--	1.41
Self-Awareness	114	74	64.9	29	25.4	9	7.9	1	.6	1	.6	1.47
Employ-ability Skills	114	77	67.5	23	20.2	10	8.8	3	2.6	1	.9	1.49
Decision-making Skills	114	71	62.3	30	26.3	10	8.8	3	2.6	--	--	1.52
Job Seeking Skills	115	67	58.3	35	30.4	9	7.8	3	2.6	1	.9	1.57
Appreci-ation & Attitudes	113	57	50.4	37	32.7	15	13.3	2	1.8	2	1.8	1.72
Educational Awareness	114	47	41.2	48	42.1	15	13.2	4	.25	--	--	1.79
Beginning Competency	110	42	38.2	44	40.0	16	14.5	8	4.5	--	--	1.91
Economic Awareness	115	34	29.6	45	39.1	33	28.7	3	2.6	--	--	2.04
Other	14	11	78.6	2	14.3	--	--	1	7.1	--	--	1.36

TABLE 3

Percentage of Time Programs Spend Providing Specific Career Education Services

Service	Highest Percentage of Time		Substantial Percentage of Time		Moderate Percentage of Time		Low Percentage of Time		Very Low Percentage of Time		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%	N	%	N	%		
Career Awareness	57	52.3	27	24.8	19	17.4	5	4.6	--	--	1	.9	109	1.74
Self-Awareness	50	46.3	24	22.2	14	7.9	9	8.3	4	3.7	7	6.5	108	1.94
Employ-ability Skills	36	34.3	23	21.9	17	16.2	21	20.0	4	3.8	4	3.8	107	2.35
Decision-making	22	21.0	34	32.4	26	24.8	18	17.1	3	2.9	2	1.9	105	2.48
Educational Awareness	25	23.6	29	27.4	24	22.6	18	17.0	5	4.7	5	4.7	106	2.49
Job Seeking Skills	28	26.4	26	24.5	20	18.9	19	17.9	10	9.4	3	2.8	107	2.58
Beginning Competency	27	25.5	16	15.1	18	17.0	21	19.8	15	14.2	9	8.5	106	2.80
Appreciation & Attitudes	19	18.6	18	17.6	20	19.6	31	30.4	11	10.8	3	7.9	102	2.97
Economic Awareness	15	14.3	14	13.3	20	19.0	24	22.9	26	24.8	6	5.7	105	3.32
Other	4	25.0	3	18.8	2	12.5	5	12.5	2	12.5	6	18.6	16	2.61

TABLE 4

Ranked Importance of Various Career Education Strategies Used in Providing Services to Deaf Persons

Strategy	Highest Importance		Substantial Importance		Moderate Importance		Lowest Importance		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%	N	%		
Individualized Counseling	41	35.7	57	49.6	14	12.2	--	--	3	2.6	115	1.76
Work Experience or Activity	28	24.8	60	33.9	17	15.0	1	.9	7	6.2	113	1.91
Incorporated Into All Academic Courses	29	27.4	27	25.5	27	25.5	--	--	23	21.7	106	2.06
Separate Career Planning Course	21	19.8	34	32.1	34	32.1	--	--	17	16.1	106	2.15
Group Counseling	6	5.6	43	39.8	47	43.5	--	--	12	11.1	108	2.43
Other	1	9.1	3	27.3	1	9.1	1	9.1	5	45.5	11	2.33

TABLE 5

Manner in Which Facility Most Often Initiates
Career Education Programming for Deaf Persons

Manner Initiated	N	%
Required by All	60	53.1
Counselor's Recommendation	18	15.9
Self-Referral	9	8.0
Instructor's Recommendation	5	4.4
Elective Classes	4	3.5
Other	17	15.0
TOTAL	113	99.9

TABLE 6

Staff Positions Assigned Responsibility For
Conducting a Formal Program of Career Education

Staff Position	N	%
General Instructional Staff	74	67.9
Program Counseling Staff	68	62.4
Career Education Specialist	57	52.3
Vocational Rehabilitation Counselor	52	44.7
Outside Consultants	22	20.2
Other	27	24.7

TABLE 7

Amount of Time Various Staff Members Devote To Providing Career Education Services

Staff Position	Highest Percentage of Time		Substantial Percentage of Time		Moderate Percentage of Time		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%		
Career Education Specialist	41	58.6	13	18.6	3	4.3	13	18.6	70	1.33
Program Counseling Staff	29	34.1	37	43.5	4	4.7	15	17.6	85	1.64
General Instructional Staff	20	24.7	52	64.2	6	7.4	3	3.7	81	1.82
Vocational Rehabilitation	13	18.6	29	41.4	13	18.6	15	21.4	70	2.00
Outside Consultant	--	--	10	21.7	12	26.1	24	52.2	46	2.54
Other	17	50.0	10	29.4	11	2.9	6	17.6	34	1.43

TABLE 8

Effectiveness of Types of Instructional Materials Used

Type Material	Most Effective		Effective		Least Effective		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%		
Program's Sent Designed Materials	79	76.0	18	17.3	--	--	7	6.7	104	1.34
Purchased Packages	20	27.8	33	45.8	--	--	19	26.3	72	1.91
State/Administration Recommended Packages	2	4.0	24	48.0	1	2.0	23	46.0	50	2.17
Other	7	30.4	9	39.1	--	--	7	30.4	23	1.76

TABLE 9

Effectiveness of Career Development Strategies Used

Measurement Strategy	Most Effective		Very Effective		Somewhat Effective		Low Effective		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%	N	%		
Structured Counseling Interviews with Deaf Persons	30	52.6	16	58.1	7	12.3	1	1.8	3	5.3	57	1.61
Agency or Self-Designed Assessment	16	38.1	9	21.4	5	11.9	2	4.8	10	23.8	42	1.78
Grades in Career Ed Courses	18	38.3	18	38.3	9	19.1	--	--	2	4.3	47	1.80
Informal Reports by Knowledgeable Others	17	28.8	24	40.7	12	20.3	--	--	6	10.2	59	1.91
General School Grades	3	6.7	23	51.1	11	24.4	2	4.4	6	13.3	45	2.31
Standardized Assessment Instrument	5	11.9	11	26.2	7	16.7	3	7.1	16	38.1	42	2.31
Other Methods	12	60.0	5	25.0	--	--	--	--	3	15.0	20	1.29

TABLE 10

Usefulness of Various Strategies to Assess the Career/Vocational Interests of Deaf Persons

Strategy	Most Useful		Useful		Least Useful		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%		
Eliciting "Stated" Interests of Person	64	74.4	20	23.2	--	--	2	2.3	86	1.47
Use of Standardized Inventory	26	34.7	42	56.0	1	1.3	6	8.0	75	2.13
Use of Agency's Self-Designed Interest Inventory	7	16.3	26	60.5	--	--	10	23.2	43	2.42
Other	10	45.4	7	31.8	--	--	5	22.7	22	2.13

TABLE 11

Environmental Factors Perceived to Affect The Career Aspirations of Deaf Persons

Environmental Factor	Strongest Effect		Substantial Effect		Moderate Effect		Some Effect		Low Effect		Least Effect		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Limited Occupational Knowledge	44	22.3	46	28.6	38	23.6	21	13.0	8	5.0	--	--	4	2.5	161	2.38
Academic/Voc. Training Success	33	20.9	44	27.8	34	21.5	22	13.9	21	13.3	1	.6	3	19.0	158	2.72
Parental Expectations	23	14.2	47	29.0	32	19.8	33	20.4	22	13.6	2	1.2	3	1.7	162	2.93
Stereotyped Career Aspirations in the Deaf Community	19	11.9	45	28.5	28	17.6	41	25.2	19	11.9	1	.6	6	3.8	159	2.99
Employment Opportunities Available	24	14.9	41	25.2	39	24.2	28	17.4	24	14.9	4	2.5	1	.6	161	3.02
Teacher or Counselor Influence	9	5.8	45	29.0	36	23.2	32	20.6	30	19.4	1	.6	2	1.3	155	3.21
Peer Pressures	10	6.3	29	18.4	48	30.4	37	23.4	25	15.8	2	1.3	7	4.4	158	3.29
Severity of Disability/ Multiple Handicaps	16	9.9	32	19.8	33	20.4	40	24.7	34	21.0	1	.6	6	3.7	162	3.77
Stereotyped Sex Role Biases	1	.6	18	11.7	22	14.3	33	21.4	57	37.0	2	1.3	21	13.6	154	5.17
Other	8	47.1	4	23.5	--	--	1	5.9	--	--	2	11.8	2	11.8	17	2.13

TABLE 12

Occupational Clusters Which Respondents Estimate Students/Clients Consider Entering or Receiving Additional Training For

Occupational Cluster	Most Frequently Considered		Very Frequently Considered		Frequently Considered		Considered		Infrequently Considered		Least Frequently Considered		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%	N	%	N	%	N	%		
Industrial Occupations	68	42.2	51	31.7	20	12.4	4	2.5	2	1.2	1	.6	15	9.3	161	1.79
Office Occupations	64	39.5	65	40.1	18	11.1	5	3.1	2	1.2	--	--	8	4.9	162	1.80
Mechanics Repairers	18	11.5	74	41.8	36	22.9	12	7.6	3	1.9	--	--	14	8.9	157	2.36
Construction	6	3.9	44	28.8	43	28.1	18	11.8	13	8.5	--	--	29	19.0	153	2.90
Education	10	6.8	28	19.0	43	29.3	31	21.1	4	2.7	--	--	31	21.1	147	2.92
Social Service	9	6.1	26	17.7	29	19.7	37	25.2	14	9.5	2	1.4	30	20.4	147	3.23
Scientific & Technical	5	3.5	20	14.1	27	19.0	27	19.0	21	14.8	4	2.8	38	26.8	142	2.49
Health	1	.7	6	4.2	37	26.1	37	26.1	22	15.5	3	2.1	36	25.4	142	3.77
Social Scientists	--	--	8	5.9	5	3.7	14	10.3	41	30.1	1	8.1	57	41.9	136	4.53
Sales	1	.7	1	.7	2	1.5	12	8.8	18	13.1	35	25.5	68	38.4	137	5.17

TABLE 13

Type of Training Respondents Estimate Deaf People Seek or Consider Seeking After Completing Present Program

Type Training	Most Often Sought		Often Sought		Less Often Sought		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%		
Seek Additional Postsecondary Training	56	36.1	78	50.3	10	6.5	11	7.1	155	1.45
No Additional Training Sought	59	38.8	55	36.2	33	21.7	5	3.3	152	1.82
On-The-Job Training	34	21.7	100	63.7	15	9.6	8	5.1	157	1.87
Professional Degree	14	9.3	63	42.0	47	31.3	26	17.4	150	2.27
Other	6	37.5	2	12.5	1	6.3	7	43.8	16	1.44

TABLE 14

Areas of Difficulty in Which Deaf Persons Are Estimated to Most Often Experience Difficulty

Area	Most Frequently Difficulty		Frequent Difficulty		Some Difficulty		Least Frequent Difficulty		N/A		N	$\bar{x}$
	N	%	N	%	N	%	N	%	N	%		
Career Choices & Plans	62	38.5	52	32.3	30	18.6	10	6.2	7	4.3	161	1.92
Work Habits & Attitudes	51	31.7	62	38.5	31	19.3	11	6.8	6	3.7	161	2.01
Organizational Adaptability	25	16.0	52	33.3	57	36.5	15	9.6	7	4.5	156	2.42
Co-Worker Relationships	10	6.2	71	44.1	57	35.4	14	8.7	9	5.6	161	2.49
Advancement	18	12.1	36	24.2	46	30.9	42	28.2	7	4.7	149	2.79
Position Performance	6	3.9	42	27.1	63	40.6	36	23.2	8	5.2	155	2.88

4. A DILEMMA: WHO AND WHAT TO TEACH IN CAREER EDUCATION PROGRAMS?

Michael Bullis

Career education is a broad and varied discipline encompassing educational, vocational, personal, and social domains. It is this diversity that causes problems in program development. The pressing issue, then, is how to limit the career program's scope in order to best meet the most pressing needs in the most effective fashion. This delineation is especially important in the present era of budgetary cuts. Consequently, questions such as, "What student groups should be emphasized in career education programs?" and "What content should be stressed for these groups?" assume primary importance in program planning.

While these questions are relevant to the educational program of a public school system, they are also pertinent to research conducted in this area. For example, the University of Arkansas Rehabilitation Research and Training Center on Deafness and Hearing Impairment (RT-31) initiated a career education project in the fall of 1982. The goal

of the project was to develop and test a career education package for use with deaf/hearing impaired students. Unfortunately, the project's goal and objectives were so broad that the construction and analysis of a thorough and effective curriculum was problematic.

In order to provide a sharper focus to this research endeavor, a three day workshop was held at RT-31 in September, 1983. In this meeting a group process model, the Nominal Group Technique (NGT) (Delbecq, Van de Ven, & Gustafson, 1975), was adopted to structure the study groups' activities and to produce information directly relevant to RT-31's career education project. Specifically, input was sought to answer three questions:

1. What population of deaf students is most in need of career education services?
2. What programmatic model should be utilized?
3. What content should be emphasized in the career education project?

While the study group's activities were designed to address the needs of RT-31's career education project, the results can be utilized by the field of career education/deafness at large to set priorities and program direction. Thus, the purpose of this chapter is to provide a review of data gleaned from the study. Toward this goal, a brief review of the procedures that were employed in the study is provided, the results of the study are presented, and those results are discussed.

Study Group Procedures

Participants

The individuals involved in this study all possessed an extensive background in deafness, career education, and vocational rehabilitation. Briefly, the participants were:

1. An instructor in a counseling program for deaf students.
2. A director of career education programs for deaf students.
3. A counselor who teaches a career exploration class to deaf students at a community college.
4. A program coordinator for a career education project located at a community college.

5. A state supervisor of vocational rehabilitation services for deaf persons.
6. A research director for a research and training center with a broad background in deafness and hearing impairment.

Nominal Group Technique

The Nominal Group Technique (NGT) was utilized with the study group to answer pressing issues facing RT-31's career education project. The NGT structures a group interaction to insure that each person contributes to the group effort and that a pre-specified product is completed in a set period of time. The NGT consists of four sequential steps:

1. Silent Generation - The group is given a question and instructions relating to a specific issue (e.g., Identify the five most pressing problems facing rehabilitation counselors). Subjects are then asked to individually generate a set number of responses (e.g., three to seven) to the specified group focus within a set time frame (e.g., 10 to 15 minutes) silently and without consultation with other group members. These statements are written on index cards. The leader instructs the members of the group to be as specific as possible and to phrase their responses in a comprehensive, yet brief, fashion.

2. Public Display of Problem Statements - As soon as the silent generation period is completed, the items are listed in a round-robin fashion. The participants take turns reading one response from their lists. The leader numbers and writes each response on a large piece of paper. When completed, these papers are taped to the wall. No discussion of the statements is permitted during this period. A group member can choose not to present one of his/her statements if it, or its equivalent, has already been presented. This process may take 15 to 30 minutes, depending upon the number of statements generated.

3. Structured Discussion - A structured discussion of each response that was listed comprises the third phase of the NGT. The group is asked to review the statements with respect to the following criteria:

(1) Is the statement clear? (2) Does the statement overlap with any other statement? (3) How important is the response? As a result of this type of discussion, statements are rewritten, combined, eliminated, or added. It is up to the group leader to structure and facilitate this interaction. In general, five minutes is devoted to the discussion of each problem statement.

4. Prioritization - After completing the third step, the group members are asked to select and rank a set number of statements (usually three to five) in order of importance. Each participant is given index cards on which they identify the most important statements generated by their group. After this initial selection, group members are asked to rank the items from most to least important. After all participants finished, the trainer totals the group's rankings and gives a weighted score to each statement. For example, it may be decided to give a score of five to a number one ranking, a four to a number two ranking and so on. Thus, if an item receives four number one rankings and two number two rankings the composite score for that item is 28 (4 x 5 + 2 x 4 = 28). After prioritization is completed the group leader presents a summary of the scores and the rankings to the group.

In summary, the NGT is a relatively simple, yet effective, method of structuring group interactions. It is designed to maximize individual input to the group process and facilitate the completion of a product within a specified period of time by forcing participants to follow a sequence of steps.

Study Group Phases

The study group process consisted of three phases. The first phase was designed to identify and describe an appropriate subject population for RT-31's career education research efforts. The second phase dealt with describing and evaluating general program formats that would meet the career education demands of the identified subject population. The third phase of the study was constructed to identify appropriate content foci for each of the two top priority groups and their respective program formats. The NGT was utilized in each of the three phases. The specific directions that were given the participants, and the procedures that were followed, are presented below.

Phase 1/Subjects. During this part of the study the following directions were given the participants:

> Identify five different populations of deaf/hearing-impaired persons who should be served through a career education program. In your description of this population, include such things as:
>
> 1) The age of the population
> 2) The age at onset of hearing loss
> 3) Presence or absence of a secondary disability
> 4) Academic abilities
> 5) Educational background
> 6) Vocational background

After the population descriptions were generated, participants were asked to identify five populations that they felt were most in need of career education training and then prioritize those groups by giving a number one ranking to the population most in need, a number two ranking to the second group and so on. Weighted scores were then computed for each group and the ranks derived.

Phase 2/Program. The NGT was implemented for both the first and second ranked subject population groups. For both of the NGT activities the following directions were given the participants:

> For the target group identified in the previous exercise describe three possible forms that the career education program may take. In your description of these program forms, include such things as:
>
> 1) Who would be in charge of such a program?
> 2) The setting in which the training should take place
> 3) Ancillary staff that would be needed
> 4) Meeting times (e.g., a one hour meeting held four times a week)

For each group, participants were asked to identify the five best programmatic approaches and then to rank order these models. The rankings were used to compute weighted scores for each program.

Phase 3/Content. In this part of the study, participants were asked to evaluate Brolin's (1978) 22 career education

competencies on a Likert-type format for each target group in terms of that population's unique needs. Specifically, the following directions were presented in written form to each participant:

> Evaluate the competencies in relation to the target group according to the following scale:
>
> 4 - the competency is of critical importance to the group
> 3 - the competency is of importance to the group
> 2 - the competency is somewhat important to the group
> 1 - the competency is not important to the group

These ratings were totaled and mean ratings for the competencies were computed for each group.

Results

Phase 1/Subjects

Descriptions of the groups produced by the NGT, the weighted scores, and the ranks given the groups are presented in Table 1.

Place Table 1 About Here

It may be seen that the top ranked group - i.e., the group that was considered most appropriate for the career education project by the workshop participants - was:

> Community college students, ages 18-20, quite possibly from the Rubella group. Some academic ability, but with inconsistent and/or unrealistic work goals. Hearing loss varies and secondary disabilities are most probably present.

Two different groups were tied for the second ranked priority group. A vote was conducted by the workshop participants and it was decided that the following group should be considered as the second ranked population:

> Deaf secondary level students who are potential dropouts. This group is academically able (third

to sixth grade abilities) but possess no vocational experience nor do they have a secondary disability that limits their functional capacity.

The middle ranked groups (i.e., ranks from 3 to 6) consist of persons of a variety of different ages and characteristics. For example, groups in this range include: the academically bound, the aged, the hard of hearing/oral student, and students in state school for the deaf. The level of impairment ranges from mild hearing loss and no secondary condition to profound hearing loss with complicating secondary disabilities.

The two lowest ranked groups - i.e., the groups considered least appropriate for the career education project by the workshop participants - were:

> Young deaf persons who are just out of high school. This group has minimal academic skills and is vocationally unskilled. Approximately one-half are multiply handicapped and they are desirous of some type of short-term training (e.g., CETA).

and

> Secondary level students who are profoundly deaf. This group is not multiply handicapped, but are uneducable and possess no vocational experience.

In summary, the higher ranked groups tended to be composed of individuals who would be considered academically and vocationally able, but who would need some remedial help. The middle ranked groups consist of a potpourri of ages, functional abilities, and career goals. Finally, the two lowest ranked groups consist of younger deaf people who have little academic ability and who are vocationally unskilled.

Phase 2/Program

Program descriptions, weighted scores, and the final rank given programs generated for the top ranked group are presented in Table 2. Program descriptions, weighted scores, and the final rank given programs generated for the second ranked group are presented in Table 3.

Place Tables 2 & 3 About Here

The programmatic option that was chosen as the best career education approach for the top ranked group, the community college bound, was:

> a program that would be conducted either at the end of high school or during the first year of the postsecondary experience. A preparation program utilizing vocational evaluation, interest testing and career exploration activities would be developed and conducted by school counselors. This course would serve as the foundation of a core year in which weekly classes would be held to develop a career plan that would be implemented at a later date.

The seven middle ranked program types (ranks 2-6) included such options as: career exploration in the schools, career preparation in conjunction with community resources, a program in a vocational/technical center, a traditional classroom approach, and an infusion approach. It should be noted that the infusion model was not given a particularly high ranking by the participants.

The two lowest ranked program models for the community college bound included cooperative arrangements with vocational rehabilitation. For example, the least appropriate career option for this target group was individual counseling with a rehabilitation counselor while another low-ranked option included the traditional work-study approach.

For the second-ranked group, potential dropouts, the best programmatic option was described in the following fashion:

> In this type of program a number of staff (e.g., vocational evaluator, job coach) would be involved and the program would be based in a rehabilitation setting. The program would be designed to assist in securing employment through a job sampling and short-term training approach that may be implemented in the community. In addition an independent living training component would be included.

The next "best" option included independent living skills training in a group home. The rest of the training approaches for this target group included residential approaches, workshop placement and individual guidance.

Phase 3/Content

The individual competency ratings for both the community college bound and potential dropout groups are presented in Table 4. It should be noted that means for each of the three major areas (Daily Living Skills, Personal-Social Skills, Occupational Guidance and Preparation) are also calculated for each group.

Place Table 4 About Here

For the community college bound group, two career education competencies were given ratings of 4.0 (i.e., a skill of critical importance) by the workshop participants. These competencies were:

18. Selecting and Planning Occupational Choices
22. Seeking, Securing and Maintaining Employment

For the potential dropouts group, two competencies were given ranking of 4.0 (competency of critical importance) by the workshop participants. These competencies are:

19. Exhibiting Appropriate Work Habits and Behaviors
21. Obtaining a Specific Occupational Skill

It should be noted that this group had higher overall ratings on most of the competencies objectives than did the first ranked group.

Discussion

The results of this workshop can be considered within two contexts: in relation to the field of career education/deafness and in relation to RT-31's research efforts. Both frames of reference are utilized in the following discussion.

Relevance to Career Education/Deafness

The study produced information that is directly applicable to RT-31's research efforts. These results, however, may also be discussed in terms of the broader professional audience, but care must be taken to avoid sweeping generalizations. For example, this information was generated from

a small group of participants who, by and large, are involved in postsecondary agencies. Thus, the results may well reflect only this viewpoint. Conversely, these results may constitute an accurate perception of the career education needs of deaf students from such professionals. With this point in mind, the discussion will turn to the three data domains - subjects, program, and content - that were addressed in the study.

Subjects. The postsecondary disposition of the workshop participants is readily apparent in the participants' choice of priority target groups. Both of the groups can be considered academically and vocationally able - but, lacking in some rudimentary skills. It is also probable that this type of student is in need of remedial help to salvage his/her potential. Unfortunately, it is just such persons who fall through the cracks in the educational and social service network. Consequently, one can appreciate the high rankings given these groups.

Program. Programmatic models to serve the top ranked (i.e., community college students) and the second ranked (i.e., potential dropouts) groups differ somewhat. The program model for the top-ranked group is more in line with an academic orientation, while the program for the second ranked group is consistent with a vocational/independent living focus. It is interesting to note that both of the models involved special career programming appended to existing school and rehabilitation programs. Moreover, it was the consensus of the participants that such programs could begin during the secondary grades.

Perhaps the most surprising result from this phase of the study was the rather low rating given the infusion approach for the top ranked-group. The infusion model calls for the integration of career content into existing educational programs. While it is generally considered the "sine qua non" of career training approaches, it is also regarded as the one of the more difficult methods to implement (Brolin & Kokaska, 1979; Solano, Egelston-Dodd & Costello, 1982). It is possible that such difficulty influenced the rating of this program option.

It is also interesting to note that career programs operated in conjunction with departments of vocational rehabilitation received little support as a viable training option from the workshop participants. This program model was a standard and effective feature of career programming in schools in the 1960's and 1970's (Halpern, 1974). In recent years, however, it has been largely abandoned as a

training option, due to confusion over administrative and funding issues (Bullis & Foss, 1983).

Content. Comparison of the competency ratings for the two groups (Table 4) reveals some distinct differences. While both groups are ranked high in the areas of Personal-Social Skills and Occupational Guidance and Preparation, community college students had a lower rating for the Daily-Living Skills domain. Thus, it would seem logical to assume that training programs for the first ranked group would emphasize competencies within the Personal-Social Skills domain and the Occupational Guidance and Preparation Area. Career education programs designed for the second group, potential dropouts, however, would include training in all three areas.

For both groups it would be necessary to further specify training foci by teaching to the highest ranked competencies. For example, for the community college group it would seem that training in the Personal-Social Skills area would stress activities to facilitate the growth of the students self confidence (competency #11) and independence (competency #14). In the Occupational Guidance and Preparation Domain, training for this group would emphasize vocational decision making (competency #18) and job seeking skills (competency #22). For the potential dropouts, training in the Daily Living Skills domain would include managing money (competency #1), food preparation (competency #5) and transportation (competency #9). In the Personal-Social Skills area, training would emphasize social behavior (competency #12 and #13) and achieving independence (competency #14). Finally, in the Occupational Guidance and Preparation domain education would be provided in work related behavior (competency #19) and vocational training (competency #21).

Relevance to RT-31's Research Efforts

It is apparent that this study produced information that is of critical importance to RT-31's planning of research efforts in the career education area. Specifically, data was amassed that defined: 1) potential subject groups, 2) programmatic models best-suited to serving the two highest ranked subject groups, and 3) content foci of programs designed to serve those groups. A series of faculty discussions, utilizing the workshop results as a foundation, were held. The results provided the impetus for debate and further conceptualization of the project within a solid framework of research priorities. Thus, this data was integrated with the administrative

demands and resource limitations of the project to formulate the final structure of the study.

RT-31 has elected to focus this project on deaf students from both of the two highest-ranked priority groups in order to maximize the impact of its research efforts. Second, it has been concluded that due to the cross-sectional nature of the subject populations and the perception that career education training should be initiated prior to departure from the public schools, that the secondary grades would be the appropriate training avenue for this group of students. Finally, in order to specify suitable content parameters for this training it was decided to look at only the highest ranked objectives from Brolin's (1978) list for both groups. This inspection revealed that the highest composite ranking of an objective that is within the academic thrust of the project and did not duplicate other research efforts at RT-31 is: Selecting and Planning Career Choices. Thus, this objective was chosen as the focus of the Center's career education research efforts.

Summary

The purpose of this chapter was to present and discuss the results of a study session on career education that was held at RT-31. Specifically, the session was structured to provide a clear focus for a research project on career education that is being conducted at the Center. Toward this end, a nominal group approach was adopted to delineate which subject group should be dealt with, what type of program model should be adopted, and what content should be stressed. These results were discussed in terms of the Center's research efforts and in relation to the field at large. It has been decided that the focus of the project should be on training in the decision-making area. The information from the workshop may also be of utility for the general field of career education/deafness. The results should not, however, be construed as emanating from a comprehensive needs assessment and, thus, must be viewed with caution.

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Table 1

Priority Groups

Population Description	Score	Rank
Community college students, aged 18-20, quite possibly from the Rubella group. Some academic ability, but with inconsistent and/or unrealistic work goals. Hearing loss varies and secondary disabilities are most probably present.	23	1
Deaf, secondary level students who are potential dropouts. This group is academically able (third to sixth grade abilities) but possesses no vocational experience nor do they have a secondary disability that limits their functional capacity.	12	2
Young adults (ages 18-25) with a severe hearing loss and a secondary disability that is functionally limiting. This group has essentially no academic skills and little or no vocational experience.	12	2
Middle and secondary level students (ages 14-18), with a profound hearing loss, approximately one-third will have a secondary disability. The group will have a fourth grade reading level and have technical career interests.	8	3
Mild to profound hearing-impaired adults (ages 18-60) who have lost their jobs. This group is educable, with work experience and has an immediate need for retraining.	8	3
Post high school students with a severe to profound hearing loss, who are academically bound (e.g., NTID).	7	4

Adult (age 18-60) deaf persons with a varied hearing loss. Individuals in this group have finished some type of high school training but are unemployed. They are essentially illiterate but educable, and have blue collar job experience.	5	5
Young adults with a severe hearing loss and a complicating secondary disability (e.g., cerebral palsy). This group has a poor academic background and no vocational experience.	4	6
Secondary level students who are hard of hearing and oral. They are academically talented, but they are in need of some program that will promote skills and interest for pursuing postsecondary training.	4	6
Young deaf students (ages 16-20) with varied hearing losses, who are entering a state school. This group has little academic skill and desires training in a blue collar job.	4	6
Young deaf persons who are just out of high school. This group has minimal academic skills and is vocationally unskilled. Approximately one-half are multiply handicapped and they are desirous of some type of short-term training (e.g., CETA).	2	7
Secondary level students who are profoundly deaf. This group is not multiply handicapped, but are uneducable and possess no vocational experience.	1	8

Table 2

Program Descriptions - Top Ranked Group

Program Description	Score	Rank
This type of program would be conducted either at the end of high school or during the first year of the postsecondary experience. A preparatory program utilizing vocational evaluation, interest testing and career exploration activities would be developed and conducted by school counselors. This course would serve as the foundation of a core year in which weekly classes would be held to develop a career plan that would be implemented at a later date.	26	1
A counselor at a secondary or postsecondary school will provide individual guidance to subjects. It is possible that this type of program will be augmented by career exploration activities managed through a computer.	14	2
An in house program in a vocational/technical school. This program would involve vocational evaluation, instructors skilled in job training and a career exploration component. This approach would occur over the space of a semester and involve small groups.	12	3
A program centered in a vocational/technical center where the work evaluator and a vocational counselor would head up the program. Evaluation, job exploration and counseling would comprise the program and ancillary staff would be involved (i.e., guest speakers, employers). This type of program would consist of several intensive	11	4

half day sessions spread over a period of one month.		
Develop an infusion approach to career education that would be implemented by specific instructors.	9	5
A community service liaison would serve as the coordinator of this type of program. Students would receive school credit and would sample jobs based in the community on a revolving basis (e.g. job shadowing).	7	6
This type of program would occur in a rehabilitation facility with a vocational evaluator or counselor in charge of the program. This administrator would implement a vocational evaluation program that would be conducted over a three to four week period.	6	7
A traditional classroom approach in which the program will be taught by the counseling staff. In addition, ancillary staff (e.g., guest speakers, employers) will be included. This type of program will probably meet for an hour session three times per week.	2	8
Vocational rehabilitation would arrange a job fair for a weekend experience.	2	8
A work study approach implemented in the secondary or postsecondary setting. The students would spend two days per week in an employment setting. Such a program would call for cooperation between vocational rehabilitation and employers.	1	9
Vocational rehabilitation counselor would perform individual counseling with subjects one time per week for four hours.	0	10

Table 3

Program Descriptions - Second Ranked Group

Program Description	Score	Rank
In this type of program a number of staff (e.g., vocational evaluator, job coach) would be involved and the program would be based in a rehabilitation setting. The program would be designed to assist in securing employment through a job sampling and short-term training approach that may be implemented in the community. In addition an independent living training component would be included.	12	1
A group home setting in which independent living skills would be taught by group home staff.	9	2
In a residential school, a teacher would coordinate a program that was one half day in vocational training or placement and one half day in training in independent living skills.	4	3
In a residential school, a half day would be devoted to academics and a half day would be spent in a sheltered workshop environment to build work skills.	3	4
A home based program in which parents would be intricately involved in independent living skills and vocational training and goal setting.	3	4
This type of program would be implemented in a sheltered workshop and emphasize basic vocational skill training (e.g., assembly work) and life skill training (e.g., self-care).	3	4

An individual guidance approach in which a vocational rehabilitation counselor would assume primary responsibility.	2	5

Table 4

Competency Ratings - Number 1 and Number 2 Ranked Groups

DAILY LIVING SKILLS	1 RATINGS	2
1. Managing Family Finances	2.67	3.50
2. Selecting, Managing and Maintaining a Home	2.00	2.17
3. Caring for Personal Needs	1.50	3.17
4. Raising Children, Family Living	2.33	2.33
5. Buying and Preparing Food	1.83	3.50
6. Buying and Caring for Clothing	1.16	3.33
7. Engaging in Civic Activities	2.00	1.33
8. Utilizing Recreation and Leisure	2.50	2.33
9. Getting Around the Community	2.83	3.83
Area $\bar{x}$	2.09	2.83
PERSONAL SOCIAL SKILLS		
10. Achieving Self-Awareness	3.33	3.17
11. Acquiring Self-Confidence	3.67	3.17
12. Achieving Socially Responsible Behavior	3.00	3.67
13. Maintaining Good Interpersonal Skills	2.83	3.67
14. Achieving Independence	3.50	3.83
15. Achieving Problem-Solving Skills	3.33	3.00
16. Communicating Adequately with Others	3.33	3.50
Area $\bar{x}$	3.28	3.43

OCCUPATIONAL GUIDANCE AND PREPARATION

17. Knowing and Exploring Occupational Possibilities	3.83	3.33
18. Selecting and Planning Occupational Choices	4.00	3.33
19. Exhibiting Appropriate Work Habits and Behaviors	3.17	4.00
20. Exhibiting Sufficient Physical and Manual Skills	2.17	3.50
21. Obtaining a Specific Occupational Skill	3.50	4.00
22. Seeking, Securing, and Maintaining Employment	4.00	3.67
Area $\bar{x}$	3.45	3.64

5. VOCATIONAL DECISION-MAKING: A CAREER EDUCATION APPROACH

Michael Bullis

The ability to make decisions is a fundamental aspect of vocational success (Gelatt, 1962; Krumboltz, 1965, Tiedman, 1961) and a key component of vocational maturity (Crites, 1969; Dilley, 1965; Westbrook, 1982) for non-handicapped persons. Decision-making (DM) skill has also been identified as a central issue in the vocational preparation and work outcomes of deaf students (Bullis, in press; Egelston-Dodd, 1980; Ouellette & Dwyer, 1984; Steve, 1980). Moreover, in the nationwide survey of career education programs discussed in Chapter 3 of this monograph, it is noted that the most serious career education need for deaf persons is in the area of career choice and planning. Further, it is believed that deficiencies in DM skills rest at the core of unemployment and underemployment problems that are encountered by deaf persons.

> Employers say that deaf and hard of hearing people underachieve on the job because of an inability to set career goals, to plan ahead, to make decisions to solve problems of career upgrading . . . The main career handicap of the postsecondary school

> deaf person is that he or she has not acquired fully the methods of goal setting, long range planning, and problem solving used in work settings by people who are successful (DiFrancesca, 1980, p. 352.).

Given the imputed importance of DM acumen to the vocational success of the deaf individual it is surprising that there are few "tried and true" methods of teaching this skill. By and large, general models of career education for deaf students do not include specific DM training (DiFrancesca, 1980; Ouellette & Dwyer, 1984). Consequently, it may be concluded that there is a glaring need to develop and implement such interventions and to research the impact of such programs.

The purpose of this chapter is to present a review of the DM literature that is germane to the vocational needs of deaf persons. Toward this end, the manuscript is organized into two parts. In the first section, a review of decision-making (DM) and vocational decision-making (VDM) is provided. The second section provides an introduction to teaching DM skills and describes a VDM curriculum designed for use with deaf secondary students. This curriculum is the foundation of the career education project being conducted at the University of Arkansas Rehabilitation Research and Training Center on Deafness and Hearing Impairment (see Chapter 3).

Foundations

It is necessary to grasp the basic nature and components of DM for at least two reasons: 1) this knowledge provides a framework from which to understand the DM process and 2) the information is the groundwork from which VDM interventions can be made. Thus, the goal of this section is to present an overview of DM and VDM.

Decision Making

Decisions permeate every aspect of our lives. Questions such as: "Where should I live?" "What should I buy?" and "How can I meet that person?"; all call for some type of decision to be made. Simply stated, a decision is a choice that is made between two or more alternatives.

While it may be argued that a chance or luck factor operates in the choice process (Caplow, 1954; Miller & Form, 1951), it is unlikely that total dependence on such a variable results in positive decision related consequences on a consistent basis. More often than not, the DM process is guided by a logical strategy (D'Zurilla & Goldfried, 1971; Heppner, 1978). Generally, a goal or objective is identified and variables to be considered are chosen. Next, the variables are weighed and evaluated through an integration of objective data (e.g., the cost is $20) and subjective opinions of the decision-maker (e.g., I don't like it) and possible choice alternatives are determined. Finally, a choice among alternatives is made and eventually the consequences of that choice are evaluated.

There is an old saying, "If you don't know where you're going, that's where you'll probably end up." This adage is particularly true in DM. It is intuitively logical to believe that a well established goal provides a necessary focus in a situation where one is to make a choice. This assumption is supported by at least two studies (Nezu & D'Zurilla, 1981a, Nezu & D'Zurilla, 1981b). This research suggests that training in goal formulation leads to a better quality decision than a decision made when such training is not provided. Thus, one can conclude that objective or goal specification is a critical aspect of the DM process.

After establishing a goal, it is necessary to identify variables to be considered in the decision and to gather informtaion on those factors. The variable selection, data gathering, and assimulation by the decision-maker is termed the DM strategy. The strategy is defined, at least in part, by the possible consequences of the different decision options. Edwards (1954) states that a basic assumption of rational DM is that choices are made that lead to the outcome with the lowest amount of negative consequences and the highest number of positive consequences for the decision-maker. In other words, choices are made -- or should be made -- that have the greatest possible utility for the decision-maker. Ideally, then , the variables considered in the DM strategy should be those that lead to a decision with the best possible consequences, or utility, for the decision-maker. Obviously, deficiencies in this selection process can lead to ineffective decisions and ultimately to poor results.

The importance of variable selection and information gathering on those variables cannot be underestimated. The human mind is vulnerable to many pitfalls in evaluating

data when making a choice (Tversky & Kahneman, 1974). These problems include such things as being unaware or insensitive to distortions in data due to unrepresentative sampling (e.g., an over-representation of particular information due to some quirk in sampling), misconceptions about relationships between variables (e.g., correlation between variables is interpreted in a causal sense) and failure to take into account the fact that variable values may fluctuate (e.g., because a value is found once, that value will remain constant). Another deficiency is that the human mind is unable to process large amounts of information. Just as incorrect decisions can be made because too little information on a subject is available or has not been procured, too much information may also be debilitating to DM. Janis and Mann (1977, p. 21-22) describe this dilemma for the decision-maker:

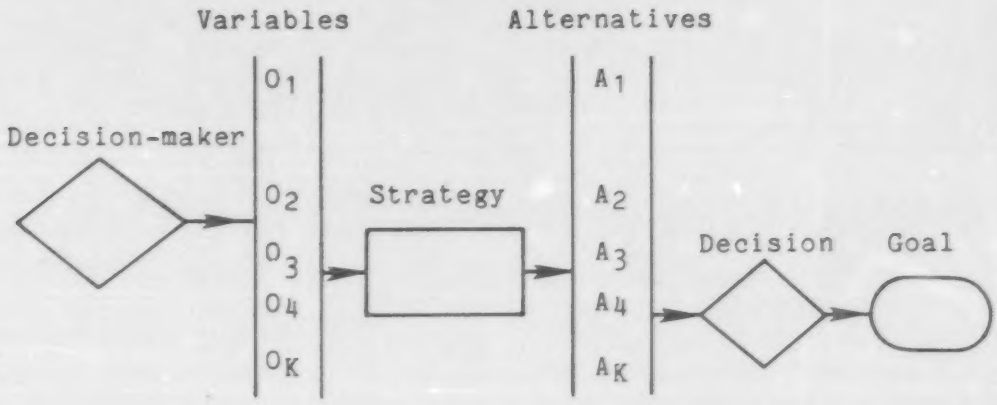
> In his attempts to obtain the degree of knowledge needed to anticipate alternative outcomes, the decision-maker is likely to be overwhelmed by information inundation, which can be quite as debilitating as information scarcity (Miller and Starr, 1964, p. 62). Moreover, so many relevant variables may have to be taken into account that they cannot all be kept in mind at the same time. The number of crucially relevant categories usually far exceeds 7 + 2, the limits of man's capacity for processing information in immediate memory (see Miller, 1956). Handicapped by the shortcomings of the human mind, the decision-maker's attention, asserts Simon, shifts from one value to another with consequent shifts in preference (p. 83).

After the information on the variables is assimilated the decision-maker must identify alternatives that are consistent with this data and the goal. From these alternatives, then, a choice - or decision - is made. While the consequences of this choice are often not immediately apparent the decision-maker does eventually evaluate the choice in terms of its relative utility.

In sum, the decision making process is - or should be - a logical and systematic method of thought. It is, by the mere virtue of the limitations of the human information processing capabilities, an imperfect process. Further,

inadequacies in either goal identification, variable selection, information gathering, or alternative selection can impede the ultimate results of this activity. An overview of the general DM model is presented in Figure 1.

General Decision-making Model--Figure 1



Vocational Decision-making

The basic constructs of DM can be applied to VDM. More accurately, VDM is the DM process applied in a career or work related situation. There are, however, aspects of VDM that are unique and must be grasped to understand the vocational choice process. Specifically, these particulars relate to the instigation of the DM situation, the types of vocational decisions, variable selection and information gathering, and the impact--both potential and real--of these decisions.

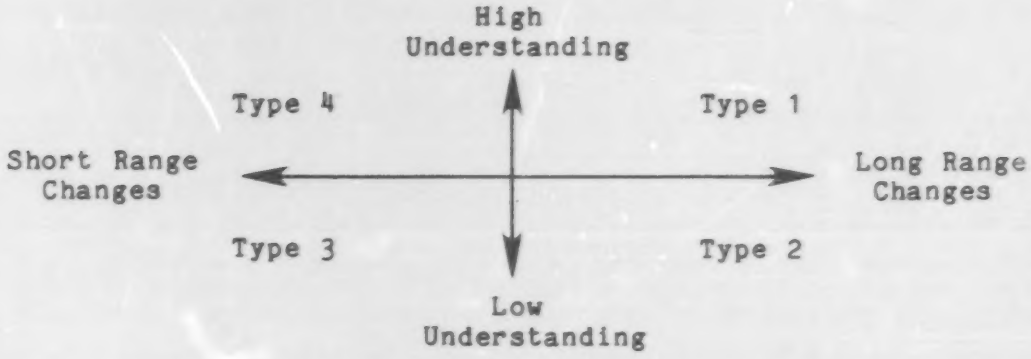
The vocational choice process can be triggered by a number of possible factors. Hilton (1962) proposed that a situation in which an individual is forced to make a vocational choice is caused when a point of cognitive dissonance (Festinger, 1957) is reached. Briefly, it is hypothesized that an individual strives to maintain a status quo relative to his/her vocational being, but environmental stimuli may operate to disrupt this stability. Examples of such environmental factors include (Hilton, 1962, p. 296-29):

1. Nearness in time to culturally determined point at which decision must be made, e.g., senior year in college.

2. Exposure to malevolent environment, e.g., excessive demands, threats, withdrawal of support, social rejection.
3. High opportunity for change of career.
4. A high number of perceived occupational alternatives.
   a. Perception of few limits imposed by lack of ability or other role requirements.
   b. Information about extensive range of alternatives.
5. High heterogeneity among perceived alternatives.
6. High demand for certainty of knowledge about alternatives.
7. Elaborate premises in regard to acceptable career decisions.
   a. Requirements that the plan be reversible.
   b. Requirement that investment in any one career never be lost.
   c. Long planning horizon, i.e. requirement that the decision fulfill long-term criteria.
8. Personal inability to suppress or distort reality.
9. Social pressure not to postpone decision-making.

It is further posited (Jepsen & Dilley, 1965) that these DM situations can be classified according to the amount of understanding or information possessed by a decision-maker and the time involved with the consequences of that decision (i.e., will the consequences of the decision have long-term or short-term impact on the decision-maker). This relationship is presented in Figure 2.

DM Situations--Figure 2



The situational types (i.e., 1,2,3 and 4) can be described in the following fashion (Jepsen & Dilley, 1965, p. 344):

Type 1 - Decisions that effect long-range changes and are guided by considerable information and understanding; e.g., Safe, career commitment decisions -- commitment to traditional "life-style".

Type 2 - Decisions that effect long-range changes but are based on limited information; e.g., Decisions about aspirations -- occupational goal selection.

Type 3 - Decisions that effect short-range changes and are based on minimal information; e.g., Day-to-day decisions affecting career patterns -- high school curriculum decisions.

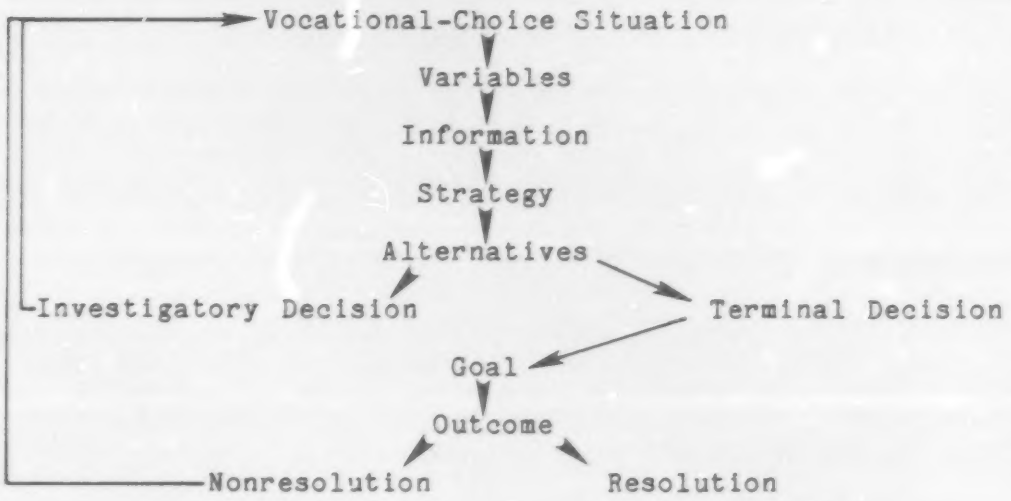
Type 4 - Decisions that effect short-range changes and are based on considerable information and high understanding, e.g., "Specialized" decisions -- college decisions.

Thus, it may be hypothesized that societal pressures, or factors, force individuals from a sort of vocational equilibrium, and these DM situations can be classified according to their long or short-range impact and the amount of understanding the subject possesses of the specific choice.

It is also possible to divide the vocational decision itself into two categories (Gelatt, 1962). The first type of decision is called a terminal decision or a decision that brings the decision-maker to some type of conculsion in a choice situation. The second type of decision is termed an investigatory decision and calls for additional

information gathering. In Gelatt's words, "The investigatory decision becomes a cycle involving information gathering and decision-making until a terminal decision is made" (1962, p. 214). An investigatory decision implies a continuing decision-making process that is essentially circular in nature, i.e., the decision instigates rather than terminates the DM process. Gelatt goes on to state, however, "The terminal decision may also suggest a cycle, since the outcome of such a decision may yield additional information which would serve to modify the result of the terminal decision" (1962, p. 241). It is also possible that upon further inspection of the outcomes from a terminal decision the decision-maker may regard that decision as less than satisfactory. Both of these negative results from a terminal decision can be termed Nonresolution. Conversely, Resolution is considered a satisfactory result of the VDM process. Figure 3 presents an overview of the sequence of activities that comprises VDM. It should be noted that this model is basically an extention of the DM pattern presented in Figure 1 to include the two decision categories and the concept of Resolution and Nonresolution.

Vocational Decision-Making--Figure 3

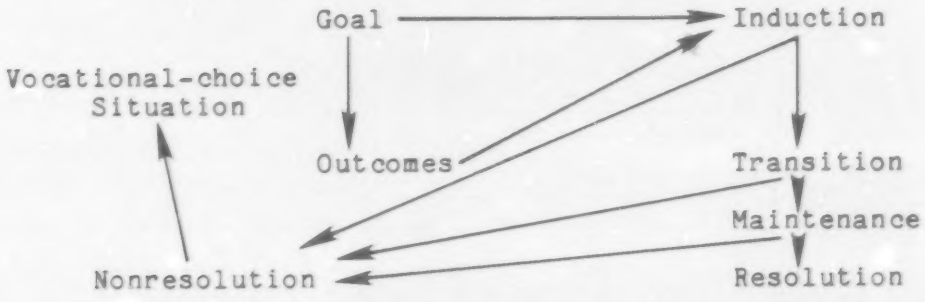


Finally, it should be noted that after the decision is made the decision-maker is faced with the task of integrating the consequences of the decision into his/her everyday life. This process is an integral component of

the VDM activity and must be understood in order to comprehend the person's behaviors after a vocational choice is made. Tiedeman (1961) calls this integrative time the Period of Implementation and Adjustment. This Period can be divided into three stages. In the first stage, Induction, the worker has made a vocational choice and is being initiated into the social and vocational aspects of that job. During Induction the worker's primary orientation toward his/her work is one of receptivity. In the second phase, Transition, the worker has gained a degree of confidence in the job and becomes assertive in that environment. Maintenance is the title of the final stage. In this stage, the worker has accepted the goals and requirements of the job and/or the job has been modified to fit that worker's vocational goals and requirements. As long as this stability is maintained the work placement is considered satisfactory and will lead to Resolution of the VDM situation. If such stability cannot be attained, it is probable that Nonresolution will occur and the VDM will be reinitiated. It is possible that the decision-maker may also view the decision in a negative light (Nonresolution) in any of the three stages.

The Period of Implementation and Adjustment can be subsumed under the general model of VDM presented in Figure 3. Essentially, this integrative period reflects the component of the model that is depicted after the Goal is reached and the Outcomes of the decision are being weighed. The subcomponent of the model is presented in Figure 4.

Implementation and Adjustment--Figure 4



It may be concluded that VDM is a multi-step process that is guided by variable selection and information gathering, and may be circular in nature. It is further

hypothesized that decisions may be either investigatory or terminal in nature and that the individual integrates the consequences of the decision into his/her life in a systematic fashion. There are at least four points at which the DM process may be weakened. These points are: goal identification, selection and evaluation of the variables including the VDM strategy, and information gathering, and alternative selection. For instance, it is difficult to make a decision that will lead to Resolution if the goals of the decision are poorly defined, if the variables included in the strategy are poorly chosen, if inadequate or over-abundant information regarding the decision is procured, or if unrealistic alternatives are chosen. Deficiencies in any one of these points may lead to Nonresloution. Deficiencies in more than one could lead to decisions with disasterous outcomes for the decision-maker. Thus, it is theoretically possible to strengthen the VDM process by teaching to these points. Specifically, VDM skills -- and subsequent outcomes -- can be improved by affording training in these aspects of critical thinking.

Intervention

It must be stressed that the model presented in the previous paragraphs can have great implications for use in the applied setting. Gelatt (1962) states that the DM paradigm provides a basic perspective from which to view the vocational process and that the model ensures that a realistic and practical approach to DM will be adopted. This is especially important in light of the complexity of VDM and the plethora of information that is often considered in this process. Volumes have been written on the psychology of vocational choice (e.g., Crites, 1969; Dawis, England & Loftquist, 1964; Super, 1953) -- and this preponderance of information points to a salient issue. Variable selection in VDM is not a simple task. Indeed, the intense introspection and personal evaluation that is required in making such a choice is difficult for even the most responsible and "together" person. For example, it is seldom that a person can easily and accurately identify his/her skills and weaknesses and translate his/her values and desires into an occupational perspective. Moreover, the array of information that is available on some vocational variables may vary in quantity and, as discussed earlier in this chapter, too much information may be as damaging to the DM process as too little data. Consequently, the critical analysis of the situation becomes a major factor in

counseling persons with VDM problems. Specifically, a major portion of the vocational counselor's work should be in helping subjects define appropriate goals, identify variables to be considered in the process, gather relevant information and specifying appropriate choice alternatives. (Clarke, Gelatt, & Levine, 1965; Crites, 1969; Johnson & Myrick, 1972; Gelatt, 1962; Krumboltz, Sherba, Hamel & Mitchell, 1982; Smith & Evans, 1973; Tyler, 1961).

In summary, the VDM model provides a perspective from which to understand the sequence, components, and pitfalls of the DM process. A case study is presented below to demonstrate this point.

Case Study

Description. Lee is a profoundly deaf adolescent who is in his senior year of high school and is faced with making a decision regarding his future after school. Lee lacks adequate communication skills for placement in a non-supportive environment. Specifically, he signs and speaks in a fairly unintelligible fashion; his writing skills are also weak. He is only an average student and has shown little interest in academic studies or in the available vocational training options. Lee's stated vocational interests are vague--he says only that he wants to make money and work upon leaving school.

Discussion. Lee has reached a decision point in his life that is culturally determined, i.e., he is soon to complete his public education (Hilton, 1962). Given this situation, it will be necessary for him to make a vocationally oriented decision that will, hopefully, lead to positive consequences. Unfortunately, the decision situation is one in which little information is available and the consequences of the decision could have long range effects. In other words, according to Jepsen and Dilley's (1965) classification this would be termed a Type 2 situation. The task at hand for the counselor, then, is to work with Lee in making the best possible decision.

The first step is to develop a general goal with Lee. This goal may be "finding any job after finishing school," "finding a specific job upon finishing school," or "entering a specific type of training." The goal provides a forward direction for the DM process and helps to focus future discussions and instigate vocationally oriented activities.

Next, it is important to select variables for consideration that are relevant to the decision at hand. Such variables include Lee's likes and dislikes, values, aptitudes, skills and resources. After the variables are selected it is necessary to gather information on these variables through testing (for aptitude and interests), research (to locate possible funding sources for training or potential job placement sites) and discussion (to clarify obscure interests or desires and to synthesize the variable/information package into a workable DM stragegy). It also is probable that the goal will be redefined through this analysis. For example, Lee's initial goal was to make money and work after leaving school. In this case the VDM process made the goal more specific. Lee now wants to be employed as an automobile mechanic. This goal specification requires the counselor to become familiar with the employment options available within this field. After discussing Lee's vocational goal, his interests, aptitudes, resources and available options three possible alternatives are delineated. These alternatives and possible scenarios from each of these alternatives are presented in the following paragraphs.

Alternative 1. Direct placement in a garage where Lee would learn automobile mechanics from "the bottom up."

Lee decides he wants to get a job as a mechanic and make money after school without securing further training. He goes directly into a local garage to learn the business from "the bottom up." He is paid only a minimal wage. Because he lacks adequate communication skills he is excluded from interacting with his fellow workers; and because he has limited writing skills he is unable to communicate with his supervisor in an adequate fashion. Further, he feels that the workers and his supervisor are talking about him. Due to this isolation and his relatively low wage Lee is both unhappy and dissatisfied with his job. He works for three months before he quits and returns to the counselor to secure assistance in making another vocational decision.

In referring back to Figure 2, it may be seen that at the time Lee made this vocational decision it was viewed as being terminal in nature. He reached his stated goal (being employed and making money) but somehow the outcomes of the decision were not congruent with what he desired. While it should be expected that problems will be experienced during the Induction and Transition phases of a

new job (see Figure 4), Lee fails to advance to the Maintenance Stage and, consequently, does not become settled in the placement. This situation leads to Non-resolution of the VDM situation (Figure 2) and Lee contacts his counselor to reinitiate the VDM process.

Alternative 2. An On the Job Training (OJT) placement where Lee would learn automobile mechanics and secure eventual employment in the training establishment.

Lee decides he is very interested in automobile mechanics but would like to learn more about the expectations and requirements of that type of job. With the help of his rehabilitation counselor he secures an OJT placement in a local garage. The placement is designed to introduce Lee to automobile mechanics in a logical fashion and the part-time placement affords him an opportunity to improve his communication skills. Checkpoints are decided on to monitor Lee's progress and satisfaction with the job. After three months, Lee is doing well on the job but his communication skills have not improved significantly and he has trouble interacting with his co-workers and his boss. He decides that the job is not for him and terminates his placement. He asks his counselor to help him make another vocational decision.

Lee's choice to enter the OJT placement can be termed an investigatory decision, i.e., the decision was made to gain a greater understanding of a vocational area. In referring to Figure 2, it may be seen that such a decision can lead to Resolution but in this instance it did not. Consequently, the VDM process was re-initiated.

Alternative 3. Lee will go to a technical training program to learn automobile mechanics.

Lee enters a comprehensive one-year program in a vocational school to learn automobile mechanics. During this period he also takes classes to improve his communication skills (i.e., lipreading, writing, speech). After finishing his training, Lee secures employment in a local garage. At first he experiences some problem in adjusting to the placement, and he is reticent to interact with others because he is unsure how the workers will react to him. Moreover, he merely accepts orders from his supervisor without discussing the work. After a couple of months of this passive behaviors, Lee finds that he can

communicate effectively with his supervisor and other workers and that he is knowledgeable in several new areas. He begins to be very assertive in discussions about work driving home his point at every opportunity. After three more months, Lee becomes comfortable in his job and with his fellow employees. He makes work-related comments only when necessary and communicates appropriately to his co-workers. In a follow-up interview with Lee, he states that he is happy in his work and is pleased with the pay he receives.

In referring to Figure 4, it may be seen that Lee's initial passivity on the job is reflective of the Induction period. His later assertiveness parallels the Transition phase and his final satisfaction with the work is equivalent to the Maintenance period. This progression leads to the Resolution of the VDM process.

Summary. The DM paradigm is a viewpoint from which to understand and structure the vocational choice process. Two questions that beg to be asked, however, are: What is the most effective way to intervene in the DM situation? and How can DM skills be taught? These questions are addressed in the following section.

Training

A key assumption of intervention techniques in VDM is that the process can be learned. This supposition has been operationalized in both individual (counselor/client interactions) (Krumboltz, 1965) and group settings (trainer/large group or class) (Krumboltz & Hamel, 1977). It should be noted that group training approaches to VDM have been shown to be a powerful intervention modality (Clarke, Gelatt, & Levine, 1965; Krumboltz, Rude, Mitchell, Hamel, & Kinnier, 1982; Krumboltz, Scherba, Hamel, & Mitchell, 1982; Krumboltz & Schroeder, 1965; Krumboltz & Thorensen, 1964; Smith & Evans, 1973). Further, because a number of persons can be taught through the group approach this model is a highly efficient training option. Moreover, this intervention paradigm is congruent with the structure of the bulk of career education programs for deaf students (Ouellette & Dwyer, 1984). In short, a group teaching approach is both powerful and efficient and fits neatly into the majority of career education programs serving deaf persons.

Unfortunately, such training curricula are difficult to develop. Thus, there are few commercially available training curricula that embrace a group approach to VDM and there are fewer still that are designed for persons with handicaps. The purpose of the next section is to describe a VDM program that has been developed for use with deaf adolescents.

Step. The Step Method: Learning and Practicing Thinking Skills (Step) (DiFrancesca, 1978) was developed under the auspices of the California State Department of Education as a career education curriculum for deaf secondary students. The program is unique in that it is designed to teach critical thinking and decision-making skills within the vocational context. Some of the thinking skills that are taught are: goal setting, achieving goals, and analyzing vocational problems. Further, it is structured to be success oriented and individual in nature. For example, a curriculum exercise calls for the student to examine and identify his/her vocational interests. The task is constructed to lead the student to an appropriate end and the step-by-step approach taken to reach this point is one that can be generalized to other tasks.

Research on the Step method suggests that it is effective in teaching DM skills. For example, students involved in the training program showed a significant positive change in teacher ratings of critical thinking behavior after completing the training program (DiFrancesca, 1980). In addition, a research project conducted under the aegis of the Department of Health, Education and Welfare (Johnson, Friedman & Good, 1977) to analyze career education materials ranked Step as the best vocational curriculum designed for use with deaf students.

The Step program is designed to be taught to groups of 6 to 10 students. The curriculum is composed of easy to follow instructions for the trainer and a variety of structured learning exercises for the student. It is to be taught in two or three one hour classes a week for a period of one academic year. There are three components to this curriculum: Part I - Thinking skills I Use Now; Part II - Setting New Goals for Myself; and Part III - Planning for Career Goals. The exercises in Part I help the student to think in an organized and logical fashion. There are three stages in this unit: helping the student to realize that he/she are - or can be - successful in reaching goals, helping the student to conceptualize individual goals, and developing the ability to identify behaviors that lead to success in achieving goals. In Part II, students apply

their DM skills in establishing new goals and in constructing plans to reach these goals. Finally, in Part III the students apply their thinking skills to establishing individual career goals and developing plans to attain these objectives. The content of each unit flows logically from the preceeding component, thus, it is essential that the program sequence be followed.

In sum, the Step curriculum is intuitively appealing and highly applicable for the school setting. It is sequential in nature and focuses on teaching thinking skills within a vocational arena. However, assertions regarding the impact of this training must be made with caution. There have been no tightly controlled experimental studies conducted that support the power of this curriculum (DiFrancesca, 1983). Given the revered position of this type of inquiry in the behavioral sciences it is clear that such research must be undertaken to substantiate claims regarding this intervention technique.

In line with this logical progression in the examination of Step and because of the DM focus of the career education project at the University of Arkansas Rehabilitation Research and Training Center on Deafness and Hearing Impairment (see Chapter Three), this curriculum will be investigated in use with deaf young adults. Preliminary studies will focus on assessing the impact of the training in an experimental fashion. Future studies may be more specific in nature, scrutinizing aspects of the VDM theory and corresponding parts of the curriculum. Such research is necessary to both demonstrate the effect of the training and to refine the theoretical basis of VDM.

Conclusion

The DM paradigm provides a useful and practical perspective from which to understand the vocational choice process and to develop interventions to aid that process. It would appear that group techniques, structured around the VDM model, provide an efficient avenue to teach DM skills. Moreover, there are several research studies that suggest that the group approach is more effective than other intervention techniques (e.g., one-to-one counseling). The Step curriculum is based on these facts and is designed for use with deaf persons. It is an impressive beginning, but research must be conducted to document the impact of the program and, hopefully, to lead us to a greater understanding of the VDM process.

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6. Where Do We Go From Here?

Michael Bullis

The past 20 years has witnessed great advances in career education for hearing-impaired students. Indeed, in the overview provided in Chapter One (Dwyer, 1984), it is readily apparent that the growth of the field has been both broad in scope and dramatic in design. Moreover, from the surveys that have been conducted on the practice of career education (see Chapter Two, Ouellette & Dwyer, 1984) it can also be seen that the basic philosophy of career education has been - and is being - integrated into the fabric of the educational system. Specifically, career education for deaf students is considered an acceptable training option that embraces self and career exploration, decision-making, independent living, and a multitude of other concepts. In short, we've made it, career education has arrived. However, in the dust of this arrival we must stop and ask ourselves, "What have we arrived at?"

Researchers (Bullis & Neulicht, 1982) state that while a field will go through a formative period where attempts are made to define it through legislation, surveys, reviews, and needs assessments, eventually a point will be

reached where the activities and processes of the field must be critically evaluated. Such analyses justify the field's existence, pinpoint strengths and weaknesses, improve services, and ultimately benefit both the profession and the individual who is served. This position can be applied directly--and rather bluntly--to career education. Simply stated, it is necessary to perform only so many surveys, reviews, and needs assessments before more intensive investigations must be implemented. We are at the point where in-depth research on career education must be initiated.

The purpose of this chapter is to propose a framework for guiding future research on the career education for deaf persons. Toward this goal, two broad content areas will be discussed: assessment and impact studies. For each domain, specific research issues that are of pressing concern to the field, will be delineated. Next, brief discussions of research methodologies that could be employed to examine these topics will be presented. These strategies represent only one way to address these subjects, but they are relatively unique to the field of deafness and, therefore, may be of interest to the reader.

It should be stressed that while this chapter is not exhaustive, it does address issues that are important to the field. Further, it is possible that this discussion will be subject to criticism, revision, or be considered incorrect. Reactions of this type, though, indicate - at the very least - a stimulation of thought and the potential for forward movement.

Assessment

Issue

Perhaps the most glaring deficit in the career education field is the lack of appropriate assessment tools. In addition, literature on testing and evaluation of deaf persons is replete with examples denoting problems in the assessment of this population and in using instruments designed for hearing persons with a deaf clientele.

For example, White & Slusher (1978) investigated the validity of four widely-used tests that were developed for use with hearing people and that purport to measure career knowledge and career decision-making abilities (Assessment of Career Development, New Mexico Career Education Test Series, Career Development Inventory and Career Maturity Inventory), with a deaf population. A concurrent approach

was adopted to examine the relationship of test scores to actual subject career knowledge and career decisions, as assessed through a structured interview. It was found that there was little congruence between the test scores and actual knowledge/performance, indicating poor concurrent validity and casting doubt on the usefulness of these tests for the career educator. The authors state:

> The findings and conclusions of this study place the deaf educator between a rock and a hard place. Clearly, the assessment of student's career related knowledge and the quality of their career decisions is an important part in successful career educational program development, implementation, and evaluation. The evidence presented here suggests that commercially available tests are not very useful in obtaining this kind of information (p. 18).

In a related area, career education now embraces the concept of social skills training. The results of several studies suggest that social skills may well be the most important variable related to employment success of handicapped persons (Foss, Bullis, Vilhaeur, in press; Greenspan, 1979). However, there are few tests in this area and those that are employed possess serious psychometric shortcomings. For example, two instruments that are commonly used to assess social skill - the Adaptive Behavior Scale (Nihira, Foster, Shellhaas, & Leland, 1969) and The Vineland Social Maturity Scale (Doll, 1953) - are psychometrically deficient validity indices, and are not recommended for use (Halpern, Lehman, Irvin, & Heiry, 1981; Salvia & Ysseldyke, 1981). Further, because these instruments were not developed specifically for use with the hearing-impaired population additional problems in administration and interpretation may be encountered.

In short, it appears that there is considerable need to develop assessment instruments that address career knowledge, career decisions, and social skills. Techniques for this purpose will be presented in the next section.

Methodology

Assessment tools should be constructed that: 1) assess the compentencies that are taught -- or should be taught -- within a specific content domain (e.g., career knowledge) and 2) provide a basis for developing appropriate instructional interventions (Foss, et al., 1984; Halpern, et al., 1981). In essence, then, test scores should not be

construed as an end unto themselves. Instead, assessment should be prescriptive in nature and provide a blueprint of subject areas that are in need of remediation. Thus, testing and training should be closely related. It is with this thought that the following research strategies are proposed.

Career Knowledge. Nunnally (1978) states that the best way to develop knowledge based tests is through a domain sampling approach. Briefly, this model calls for the specification of a content domain, the generation of appropriate items from this domain, and the psychometric analysis of this content. In this fashion the test reflects the content of the specific subject area and is composed of reliable and content valid items. This method has been utilized in career education projects in other fields such as special education (Halpern, Irvin, & Landman, 1979; Halpern, Raffeld, Irvin, & Link, 1975a, 1975b) and general education (Shoemaker, 1982). Further, studies have shown that instruments developed by following this model are reliable and possess acceptable levels of content, concurrent and predictive validity (Irvin & Halpern, 1977; Irvin, Halpern, & Landman, 1980).

In developing an instrument to measure career knowledge for deaf persons the domain sampling model would be applied in the following manner. First, a specific content area would be delineated (e.g., knowledge of jobs, knowledge of job-seeking skills, knowledge of personal attributes). Next, deaf educators would be asked to generate content items in the domain. Finally, items would be rewritten, analyzed, and placed within a test format. Subsequent research steps would establish item statistic characteristics, test reliability and test validity.

Decision-making Assessment Model. What is a good decision? What is a bad decision? Obviously, it can be reasoned that a good decision is one that leads to positive consequences for the decision-maker, while a bad one leads to negative consequences for that person. Unfortunately, the demarcation between good and bad is never -- or hardly ever -- clear. There are aspects of a decision that are positive and negative. Consequently, a good decision is one that usually is more positive than negative, and a bad decision is one that is usually more negative than positive. Given that the vocational decision-making process can be taught and the outcomes of a decision improved through such training (See Chapter Five of this monograph; Bullis, 1984) it would make sense to scrutinize the decision-making process as well as the outcome of the decision. Thus, it

seems logical and appropriate to assess both consequences and the process of the decision-making act (Krumboltz, Hamel, & Scherba, 1982).

This model has been utilized in a simulation or game approach to assess the career decisions of hearing adolescents and adults (Krumboltz, et al., 1982). Essentially, subjects are called upon to make career decisions within the parameters of a game situation. Materials are given the subjects to: 1) specify their work values (e.g., income, independent), 2) delineate the manner in which they will go about making the decision, 3) identify career information sources they would use in making the decision, and 4) select a specific job from among 12 fictitious jobs. The product of the decision is evaluated by comparing the subject's stated values to those embodied in the chosen occupation. The decision-making process is analyzed by timing the amount of time taken to reach a decision and counting the number of information sources accessed and the number of different jobs considered.

The approach is attractive in that it is more life-like than traditional paper and pencil tests, and provides information on both the process and product of the decision-making effort. However, this technique may suffer from heavy reliance on verbal abilities and lack of a realistic array of occupational choice options. Thus, a computerized interactive approach that embodies the components of the simulation model but utilizes actual jobs may be a viable alternative.

Social Skills. Goldfried and D'Zurilla (1969) describe a test development approach, the Behavioral Analytic model, that is well suited to guiding the construction of assessment instruments in the area of social skills. This model is based on the premise that environmental factors are key determinants of behavior and, consequently, must be included in the testing instrument. The approach calls for the detailed analysis of criterion behaviors (social skills) in the environment of primary concern (for career education this environment would most probably be the job setting). The model consists of four stages. In the first stage, situational analysis, problematic situations within the skill areas are identified. These problems eventually become test item stems. In stage two, response enumeration, a wide variety of responses, both effective and ineffective, are solicited for each problematic situation. These responses eventually become the response alternatives to the test items. The third stage is response evaluation,

wherein each possible response is evaluated for effectiveness by persons who are in positions of authority in the setting under consideration. In this way the correct and incorrect responses are delineated. In stage four, development and evaluation of the measure, results of the first three stages are developed into an assessment instrument, and appropriate statistical procedures applied for establishing the measure's reliability and validity.

It may be seen that this approach calls for the researcher to identify social problems that actually occur in the environment of concern and to enlist the active involvement of representatives of the tests' subject population, and expert judges. This approach has been utilized to construct social skill tests in general counseling (D'Zurilla & Nezu, 1980; Goldfried & D'Zurilla, 1969; Nezu & D'Zurilla, 1981) and in special education (Foss & Bullis, 1983; Foss, Bullis, & Cheney, submitted for publication; Foss et al., in press; Foss, Cheney, & Bullis, 1983).

In developing an instrument to measure the social skills of deaf persons the Behavioral - Analytic model would be applied in the following way. First, a specific content area would be delineated (e.g., social skills in employment) and problems in this domain would be sampled. Second, deaf students would be asked to generate a variety of possible solutions to the problems. Third, the responses would be evaluated by expert judges to identify correct and incorrect responses to the social problems. Finally, these test items would be subjected to traditional item analyses and test development procedures to establish item statistic characteristics, test reliability, and test validity.

Impact

Issue

An obvious question that needs to be investigated is "Does career education work?" However, the field is multifaceted and highly variable - i.e., not everyone perceives and practices career education in the same manner. Thus, it is virtually impossible to ask if "it" works. Instead, it must be asked, "what specifically about career education works?"

The expansion and growth of career education services for deaf persons has not been accompanied by a corresponding growth of research studies designed to examine the effect of those new practices. Thus, the actual

impact of materials designed to develop specific skills and attributes (e.g., self-concept, decision-making) has been largely unaddressed and un-evaluated. Moreover, the effect of different teaching approaches in career education has been woefully under-researched. For example, few - if any - investigations exist that evaluate the power of different career training strategies. Consequently, it is difficult to draw conclusions about which teaching modalities are most appropriate with specific populations.

Similarly, program evaluation studies should also be initiated. This type of investigation is defined as the ". . . systematic investigation of the worth or merit of an object, e.g., a program, a project, or instructional materials" (Joint Committee on Standards for Educational Evaluation, 1981). Systematic investigation involves the use of research tools (e.g., measurement, statistics); merit is a measure of excellence in terms of intrinsic properties (e.g., was the program well-received?); and worth is the value of the object in terms of its purpose (e.g., was an increase in performance noted after the subjects were involved in program?) (Rinehart, Note 1).

The benefits of this type of investigation are threefold. First, empirical support can be given to a particular type of intervention model. In other words, it is shown that a specific program is effective or not. Second, program evaluation studies, if replicated, provide support for the generalizability of specific types of programming (e.g., NPCE). Finally, these studies provide an overview of how programs are conducted and the content of those programs. In this way, it is possible to avoid reinventing the wheel by accessing information on existing programs.

In sum, research needs to be initiated to address the effectiveness of both specified training approaches and different programs. It seems especially important to conduct such studies to demonstrate the impact of these activities in this era of budgetary austerity. Such research could provide powerful evidence for the beneficial effect of career education on the deaf student.

Training. Perhaps the most widely accepted method to investigate the problems raised in the preceeding section is the traditional experimental or quasi-experimental approach. However, because such studies require large numbers of subjects their implementation may be difficult to set up and conduct in many settings. It should be noted also, that this type of research is based on statistical analyses. In essence, treatment effects are analyzed

through the comparison of group means on a dependent measure (e.g., comparing the experimental group's mean score on a test to the control group's mean score on the same measure). It is important to note that this analysis involves the averaging of individual scores to create an average score. It is entirely possible, then, that while some subjects may improve with treatment others may deteriorate but, due to averaging, the overall group mean may improve. In short, the true impact of the treatment on certain types of subjects may be camouflaged and the averaging of effect may result in misleading research results.

A type of scientific inquiry that does not require large subject populations from which to draw and that does not fall prey to the problem of averaging of effects, is single subject--or single organism--research. This line of research is widely used in special education and clinical psychology, but is noticeably absent in both the American Annals of the Deaf and the Journal of Rehabilitation of the Deaf. Basically, this approach calls for the intensive experimental investigation of one subject. For example, we may be interested in evaluating the impact of a treatment curriculum designed to teach a specific work-related skill with a multiply handicapped deaf adolescent. Prior to implementing the training, however, the work related skills are charted to ascertain the frequency with which the desired skill is emitted; this time frame is termed the baseline period. Next, training is initiated and the target behavior is again charted. Ideally, in this experimental phase the target behavior will improve. However, it is possible that fluctuations in behavior may be due to some extraneous variable and not the designated treatment. In order to rule out such a possibility the treatment is withdrawn and the behavior is again charted. If the treatment is the primary cause of the subjects' performance, the withdrawal of the treatment should result in a deterioration of behavior.

This elemental design is termed an A-B-A design. It is the simplest of the single subject research approaches that allow for inferences about causality (e.g., causal relationships between treatment and dependent variable) to be made. It can be observed from the previous example that it involves only one subject and that the impact of the training is evaluated through a visual and not statistical analysis of the improvement in the specified dependent variable. Thus, problems in securing large numbers of subjects and in interpreting statistical results can be precluded. Moveover, since statistical inferences are not

made, the problem of averaging individual scores is obviated as well.

An obvious shortcoming of this type of research, though, rests in the generalizability of the results. It is difficult to conclude that because a treatment is effective or ineffective for one subject that it will have the same impact on other persons with similar characteristics. The answer to this dilemma is to replicate the research study to insure that experimental effects will generalize. It may be noted that replication is also a suggested practice in traditional research studies (Borg & Gall, 1979; Kerlinger, 1973).

In conclusion, single subject research methodology offers the field of career education an exciting new tool with powerful potential. This type of investigation is well suited to the applied setting and could yield important information regarding training impact and curricula potency. For more information of this research model the reader is referred to Baer, Wolf, and Risley (1968), Kazdin (1973), and Hersen and Barlow (1976).

Program Evaluation. Program evaluation is a broad discipline that has been the object of much rhetoric, research, and writing (e.g., Scriven, 1967; Stufflebeam, 1971). These types of studies have been conducted on educational programs from a national perspective (Coleman, Campbell, Hobson, McPartland, Mood, Weinfield, & York, 1966), on large regional programs designed to facilitate specific educational skills (Becker & Gersten, 1982), and on specific career education programs for handicapped students (Chaffin, Spellman, Regan, & Daviso, 1971; Muth & Singell, 1975). Unfortunately, there is a paucity of this type research in the deafness literature that relates to career education. Such investigations must be implemented to demonstrate the impact of this training model.

The goal of this section is to provide caveats for the prospective program evaluator to follow. These guidelines are distilled from several sources and serve as a "common-sense" approach to such investigations.

1. It is critically important to include as detailed a description of the program being evaluated as possible in the evaluation narrative. Such a description provides a sketch of the goals and objectives of the program, the education procedures followed, the type of subjects served, and curricula that are employed. Further, this type of

description allows readers to pinpoint similarities with their own program and revise training components accordingly.

2. Program evaluations should not be designed to produce only data. Stated otherwise, the information from this kind of study should be utilized to improve the program as well as demonstrate its impact. This model of research is very applicable to the practical setting and can be used to make decisions about program refinements (Stufflebeam, 1971).

3. Multiple instruments should be used to assess the impact of career training (Irvin, Crowell & Bellamy, 1979; Hersen & Bellack, 1976; Oliver, 1979). Such a model has several advantages over a single instrument approach including an improvement in data quality, assessment of multiple program objectives, and the gathering of information for different user groups (e.g., administrators, program supervisors).

4. In a similar vein to caveat #3, it is advisable to include assessment information from several different perspectives of the program. Thus, it is wise to include data from students, teachers, administrators, parents and employers to gain a broad based view of the program.

5. Due to problems in assessing the career knowledge and skills of deaf persons (see first section of this chapter) socially relevant variables that can be analyzed with a minimum of inference should be included in the evaluation. For example, in career education evaluations it may be appropriate to include the salary range of program graduates, the length of time it took graduates to find employment, and the number and kind of social and community activities that they engage in, and so on.

6. Wherever and whenever possible it is highly advantageous to employ some type of experimental, quasi-experimental or ex-post facto design in analyzing the impact of a career education program. Such an approach can demonstrate, to some degree, the career education approach is better than another type of training or no training at all. It is not enough only to define what happened to a group of

students that receive career programming, it is much more powerful to demonstrate that what happened to these students is appreciably better than what happened to a comparative group.

Summary and Conclusion

Intensive research (e.g., test development, single subject designs, experimental research, program evaluation) is a commonly accepted -- and expected -- practice in the behavioral sciences. Unfortunately, these types of studies have been largely omitted from the literature pertaining to the career education of deaf students. The purpose of this chapter was to call for the initiation of such investigations. Toward this end two broad content domains were described and research techniques for addressing specific issues within these areas were reviewed. This treatment was not meant to be, nor should it be considered, exhaustive of suitable content areas or research strategies. The primary intent of this manuscript was to provoke thought, provide suggestions, and encourage research in this field.

It should be noted that the investigations suggested in this chapter are difficult to construct and implement. It must be stressed, however, that the career education field is at a point where this type of research must be implemented. Further, such studies can help to refine and improve the field. It is only through such studies that career education will become a powerful tool in combatting the all too pervasive problems of unemployment and underemployment that plague the deaf population.

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Note 1: Rinehart, D. (1982). Program evaluation. Eugene, OR: University of Oregon, Department of Education, Division of Curriculum and Instruction.

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APPENDIX A: A DIRECTORY OF CAREER EDUCATION CURRICULA USED IN STATE SCHOOLS AND POSTSECONDARY INSTITUTIONS

Roger Beach[1]

As indicated in the first chapter of this monograph, the period between 1978-1983 was an era of leadership in the field of career education for deaf people. The most pervasive effort to organize and implement career education programs in schools serving hearing-impaired students was initiated through a cooperative venture by the Model Secondary School for the Deaf (MSSD) at Gallaudet College and the National Training Institute for the Deaf (NTID). This cooperative arrangement, called the National Project on Career Education (NPCE), had as one of its major activities in-service training that could be afforded to practitioners in school serving hearing-impaired students.

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This training resulted in comprehensive career programs that were infused into the school curriculum.

The concomitant impact of these in-service workshops, coupled with other societal and legal developments, has resulted in significant strides in establishing career education programs for hearing-impaired students. Despite these advances, however, it has been recently noted that, "The greatest need expressed by practitioners in both regional and state inservice programs has been for curriculum and materials designed for infused strategies." (Updegraff & Egelston-Dodd, 1982, p. 23). Thus, it may be concluded that knowledge of a key component of career education, i.e., curricula and materials designed for infused educational strategies, is lacking.

With this thought in mind it was decided to conduct a survey to: 1) identify existing career education curricula used by schools serving hearing-impaired persons, and 2) identify commercially published materials which have been incorporated in those programs. The goal of this appendix is to summarize this information, in the following fashion. First, a chart is presented that lists: 1) schools, 2) the career education model used, 3) when career education begins, 4) if career programming is infused or not, 5) if published curricula are utilized, and 6) the titles of curricula used. Second, a directory of the schools participating in this survey is presented. Finally, a directory of publishers of career materials is given.

It is hoped that readers will be able to identify programs that are using similar materials; identify programs that are conducting training programs of interest; and identify curricula of interest. It should be realized that this information is not exhaustive and that more complete descriptions of the programs and curricula can be obtained by contacting programs and publishers directly. Moreover, it must be noted that this appendix will be dated within a few years.

Section 1 - Overview of Schools

Some 34 secondary level schools and 19 postsecondary schools serving hearing-impaired students responded to this survey. Briefly, the respondents were asked to provide a description of their career program, to designate the career development model that they adopted, and to describe

the curriculum that they use. This information is summarized in the following pages for each responding school. The secondary schools are numbered from 1-34 and the post-secondary schools are numbered from 35-53.

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
1. Alabama Institute for the Deaf & the Blind	U.S. Office Career Education Occupational Clusters			X			X		X	
2. Arizona School for the Deaf & the Blind	CCEM						X		X	
3. Arkansas School for the Deaf	Project CAP	X					X	X		- Project CAP - Career Awareness Program
4. California School for the Deaf	--	X	X	X		X		X		- Creative Teaching Press - Developmental Learning Materials - Educational Research Counsel of America - Eyegate House, Inc. - Houghton Mifflin Co. - James Book Publishers - King Features - The Learning Process Center - Parker Brothers - Society for Visual Education Inc. - Xerox Corp.

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
5. Colorado School for the Deaf & the Blind	NPCE	X	X	X		X		X		- Fearon-Pitman Publishers, Inc. - Scholastic Book Service - Science Research Associates, Inc.
6. Kendall Demonstration Elementary School	CCEM	X	X			X		X		- Fearon-Pitman Publishers, Inc. - Gallaudet College Press Division of Public Service - Pre-College Programs "Scope and Sequence for Career Education at KDES" - "Resource Guide for - Career Education" - "Feelings: Keys to Values." - "Decisions, Decisions" - "Shooting for Goal" - "Career Awareness Learning Activities I and II"
7. Florida School for the Deaf and the Blind	NPCE CCEM	X	X	X		X		X		- Florida Dept. of Education, Division of Vocational Education - The CAPS Program - "Career Education Activity Guide"

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
8. Illinois School	--					X			X	
9. Iowa School for the Deaf	--	X	X	X		X		X		- "Career Education Circulum Guide"
10. Kentucky School for the Deaf	--						X	X		- Cook Writer - Hopewell Books, Inc. - Media Materials, Inc. - McKnight Publishing Co. - Tennessee Visual Education Services, Inc.
11. Louisiana State School for the Deaf	--						X	x		- Houghton Mifflin Co. - James Books Publishers - McGraw Hill - Time Share H.M. Co.
12. Maryland School for the Deaf	NPCE	X	X	X		X		X		- Allyn and Bacon - Anchor Press/ Doubleday - Career Aids Inc. - Children's Book Co. - Educational Research Marketing, Inc. - Fearon-Pitman Publishers - Frank E. Richards Publishing Co. - Interactive Media - James Book, Publisher lishers - Learning Seed Co.

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
12. (con't.)										- National Center for Human Potential - Opportunities for Learning, Inc. - Ten Speed Press
13. Boston School for the Deaf	--						X		X	
14. Michigan School for the Deaf	--						X		X	
15. Minnesota School for the Deaf	--						X		X	
16. Mississippi School for Deaf	Texas Developmental Language Centered Curriculum					X		X		- Gallaudet College Press Division of Public Services - Project CAP - Frank Richards Publishing Co., Inc.
17. Nebraska School for the Deaf	NPCE CCEM	X	X	X		X		X		- James Book Publishers
18. Marie H. Katzenbach School for the Deaf	--						X		X	

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
19. New Mexico School for the Deaf	NPCE CCEM					X		X		- Allyn and Bacon - Curriculum Innovations, Inc. - Educational Research Council of America - Follet Publishing Co. - Gallaudet College Press Division of Public Services - Hopewell Books Inc. - McKnight Publishing Co. - Pre-College Programs - Singer Career Systems - Society for Visual Education Inc. - Winston Press - Science Research Associates, Inc.
20. New York School for the Deaf	--	X		X		X			X	
21. New York State School for the Deaf	--	X		X		X			X	
22. Central North Carolina School for the Deaf	--						X		X	

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
23. Eastern North Carolina School for the Deaf	NPCE CCEM								X	
24. Oklahoma School for the Deaf	NPCE CCEM	X	X	X		X		X		- "Career Vocational/ Educational Training"
25. Oregon State School for the Deaf	NPCE CCEM	X	X	X		X		X		- "Career Awareness/ Exploration Curriculum Kit K-12" - EMC Corporation - Fearon-Pitman Publishers, Inc. - Hopewell Books, Inc. - Marion Education Service District - New Readers Press - Northeast Regional Media Center for the Deaf
26. Pennsylvania School for the Deaf	NPCE CCEM	X	X	X		X			X	
27. Scranton State School for the Deaf	NPCE	X	X	X		X			X	Curriculum not for dissemination
28. South Carolina School for the Deaf & the Blind	--	X				X		X		- Allyn and Bacon - Gallaudet College Press Division of Public Service - Hopewell Books, Inc. - Mafex Association

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
28. (con't)										- Quercus Corp. - Scholastic Book Service
29. Tennessee School for the Deaf	USOCE Occupational Clusters			X		X			X	
30. Austine School for the Hearing Handicapped Children	--	X		X		X			X	
31. Virginia School for the Deaf and the Blind	MSSD					X		X		- Changing Times Educational Services - Chronicle Guidance Publications, Inc. - Educational Design, Inc. - Fearon-Pitman Publishers, Inc. - McGraw Hill, Inc. - U.S. Dept. of Labor
32. Virginia School for the Deaf and Blind	--	X	X	X		X		X		- Allyn and Bacon - Aspen Publications - Brookes Publishing Co. - CEBO Standard Publisher - Developmental Learning Materials - Ewing Publications - George Wright Ferguson - Follett Publishing Co.

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
32. (con't.)										- Guidance Publishing Co. - Hopewell Books, Inc. - James Book Publishing - Love Publishing Co. - Mafex Association, Inc. - McGraw-Hill Publishing Co. - McKnight Publishing Co. - Dutton Press - OK Books - Pre-College Programs - Prudential Press - Psychoeducational Press - Russell Forwalt - Science Research Associates, Inc. - Special Learning Corporation - Teaching Resources - U.S. Dept. of Labor
33. Washington State School for the Deaf	New Jersey Vocational Technical Curriculum Laboratory					X			X	

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
34. West Virginia Schools for the Deaf & the Blind									X	
35. Pima Community College					X		X	X		- Hopewell Books, Inc. - Janus Book Publishers
36. University of Arizona College of Education					X		X		X	
37. California State University at Northridge					X	X			X	
38. Pasadena City College					X		X		X	
39. San Diego Community College Dist.					X		X		X	
40. El Camino College					X		X	X		- D & E Publishing
41. College of the Sequoias					X		X		X	

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
42. Community College of Denver					X		X	X		- Singer Career Systems
43. Gallaudet College					X		X	X		- Gallaudet Press
44. Tampa Technical Institute					X		X		X	
45. Waubonsee Community College					X		X	X		- Chronicle Guidance Publications, Inc. - Time Share Co. - U.S. Dept. of Labor
46. Iowa Western Community College					X		X	X		- Chronicle Guidance Publications, Inc. - Finney Company - Time Share Co.
47. Delgado Comm. College					X		X		X	
48. University of Minnesota Student Counseling Bureau					X				X	

Schools	Career Education Model	Career Education Provided				Infused		Published Curriculum		Name of Publisher/ Published Curricula
		Primary	Jr. H.S.	H.S.	P.S.	Yes	No	Yes	No	
49. NYC Technical College of the City University of N.Y.					X	X		X		- Janus Book Publishers - New Readers Press
50. East Carolina University					X		X		X	
51. Columbus Technical Institute					X		X		X	
52. Portland Community College					X		X	X		- Prentice Hall Publishers
53. S.W. Collegiate Institute for the Deaf					X		X	X		- Houghton-Mifflin Co.

Section 2 - Directory of Schools

1. Alabama Institute for the Deaf and the Blind
   205 E. South Street, P.O. Box 698
   Alladega, AL 35160

Contact Position: Vocational Supervisor

2. Arizona State School for the Deaf and the Blind
   P.O. Box 5545
   Tuscon, AZ 85703

Contact Position: Coordinator of Language Curriculum

3. Arkansas School for the Deaf
   2400 West Markham
   Little Rock, AR 72203

Contact Position: Superintendent

4. California School for the Deaf
   39350 Gallaudet Drive
   Fremont, CA 94538

Contact Position: Career Counselor

5. Colorado School for the Deaf and the Blind
   Kiowa and Institute Streets
   Colorado Springs, CO 80903

Contact Position: Coordinator of Curriculum Development

6. Kendall Demonstration Elementary School
   Gallaudet College
   Kendall Green
   Washington, D.C. 20002

Contact Position: Director of Curriculum and Program Evaluation

7. The Florida School for the Deaf and the Blind
P.O. Box 1209
St. Augustine, FL 32084

Contact Position: Director, Staff and Curriculum Development

8. Illinois School for the Deaf
125 Webster Street
Jacksonville, IL 62650

Contact Position: Curriculum Coordinator

9. Iowa School for the Deaf
1600 S. Highway 275
Council Bluffs, IA 51501

Contact Position: Superintendent

10. Kentucky School for the Deaf
S. 2nd Street
Danville, KY 40422

Contact Position: Principal

11. Louisiana State School for the Deaf
P.O. Box 3074
Baton Rouge, LA 70821

Contact Position: Director of Vocational Education

12. Maryland School for the Deaf
101 Clarke Place
Frederick, MD 71701

Contact Position: Assistant Principal/Curriculum and Instructional Media

13. The Boston School for the Deaf
800 North Main Street
Randolph, MA 01268

Contact Position: School Adjustment Counselor

14. Michigan School for the Deaf
    W. Court Street and Miller Rd.
    Flint, MI 48502

Contact Position: Coordinator of Career Education

15. Minnesota School for the Deaf
    P.O. Box 308
    Fairbault, MN 55021

Contact Position: Not indicated

16. Mississippi School for the Deaf
    1253 Eastover Drive
    Jackson, MS 39211

Contact Position: Curriculum Director

17. Nebraska School for the Deaf
    3223 North 45th
    Omaha, NE 68104

Contact Position: Vocational Coordinator

18. Marie H. Katzenbach School for the Deaf
    320 Sullivan Way
    West Trenton, NJ 08628

Contact Position: Career Education Counselor

19. New Mexico School for the Deaf
    1000 Cerrillos Road
    Santa Fe, NM 87501

Contact Position: Not indicated

20. New York School for the Deaf
    555 Knollwood Road
    White Plains, NY 10603

Contact Position: Vocational Coordinator

21. New York State School for the Deaf
401 Turin Street
Rome, NY 13440

Contact Position: Principal

22. Central North Carolina School for the Deaf
Summit Avenue
Greensboro, NC 27405

Contact Position: Director of Education

23. Eastern North Carolina School for the Deaf
Highway 301 North
Wilson, NC 27893

Contact Position: Superintendent

24. Oklahoma School for the Deaf
East 10th and Tahlequah Streets
Sulphur, OK 73086

Contact Position: Director of Curriculum Development

25. Oregon State School for the Deaf
999 Locust Street, N.E.
Salem, OR 97303

Contact Position: Career Education Coordinator

26. Pennsylvania School for the Deaf
7500 Germantown Ave.
Philadelphia, PA 19119

Contact Position: Principal, Nevil Vocational School

27. Scranton State School for the Deaf
1800 N. Washington Avenue
Scranton, PA 18509

Contact Position: Superintendent

28. South Carolina School for the Deaf and the Blind
Cedar Spring Station
Spartanburg, SC 29302

Contact Position: Curriculum Director for the Deaf

29. Tennessee School for the Deaf
2725 Island Home Blvd.
Knoxville, TN 37901

Contact Position: Supervising Teacher for High School

30. The Austine School for the Hearing Handicapped Children
120 Maple Street
Brattleboro, VT

Contact Position: Principal

31. The Virginia School for the Deaf and the Blind
Staunton, VA 24401

Contact Position: Career Counselor

32. Virginia School for the Deaf and the Blind
Hampton, VA 23661

Contact Position: Guidance Counselor

33. Washington State School for the Deaf
P.O. Box 5187
Vancouver, WA 98668

Contact Position: Not indicated

34. The West Virginia School for the Deaf and the Blind
Main Street
Romney, WV 26757

Contact Position: Principal, Vocational Education

35. Pima Community College
    2202 West Anklam Road
    Tuscon, AZ 85709

Contact Position: Director, Special Services

36. The University of Arizona
    College of Education
    Department of Rehabilitation
    Tucson, AZ 85721

Contact Position: Counselor

37. California State University at Northridge
    18111 Nordhoff Street
    Northridge, CA 91330

Contact Position: Student Personnel Specialist

38. Pasadena City College
    Special Services for the Disabled
    5170 East Colorado Blvd.
    Pasadena, CA 91106

Contact Position: Counselor Specialist, Hearing Impaired Program

39. San Diego Community College District
    Education Cultural Complex
    4343 Ocean View Blvd.
    San Diego, CA 92113

Contact Position: Counselor/Specialist for the Deaf and Hard of Hearing

40. El Camino College
    16007 Crenshaw Blvd.
    Vio Torrance, CA 90506

Contact Position: Specialist, Hearing-Impaired Program

41. College of the Sequoias
    915 S. Mooney Blvd.
    Visalia, CA 93277

Contact Position: Counselor/Teacher

42. Community College of Denver
    Center for the Physically Disadvantaged
    3645 W. 112th Avenue
    Westminster, CO 80030-2199

Contact Position: Career Planning and Placement Specialist

43. Gallaudet College
    Counseling and Placement Center
    Ely Center
    800 Florida Ave., N.E.
    Washington, D.C. 20002

Contact Position: Director, Career Counseling Unit

44. Tampa Technical Institute
    3920 E. Hillsborough Ave.
    Tampa, FL 33610

Contact Position: Coordinator, Deaf Services Program

45. Waubonsee Community College
    Illinois Route 47 and Harter Road
    Sugar Grove, IL 60554

Contact Position: Counselor, Hearing-Impaired Program

46. Iowa Western Community College
    Council Bluffs Center
    2700 College Road
    Council Bluffs, IA 51501

Contact Position: Coordinator, Vocational Assessment Center

47. Delgado Community College
City Park Campus
615 City Park Avenue
New Orleans, LA 70119

Contact Position: Counselor, RECD

48. University of Minnesota
Student Counseling Bureau
101 Eddy Hall
192 Pillsbury Drive, S.E.
Minneapolis, MN 55455

Contact Position: Counselor, Hearing-Impaired Support Services

49. New York City Technical College of the City University of New York
300 Jay Street
Brooklyn, NY 11201

Contact Position: Project Director, Vocational Education Act Program for Deaf Adults

50. East Carolina University
Program for Hearing-Impaired Students
Division of Student Life
A-114 Brewster Bldg.
Greenville, NC 27834

Contact Position: Director

51. Columbus Technical Institute
550 East Spring Street
Columbus, OH 43216

Contact Position: Research and Development, Handicapped Student Services

52. Portland Community College
12000 S.W. 49th Avenue
Portland, OR 97219

Contact Position: Instructor, Handicapped Student Services Office

53. Southwest Collegiate Institute for the Deaf
Howard County Junior College District
Avenue C
Big Springs, TX 79720

Contact Position: Career Orientation Instructor

Section 3 - Directory of Publishers

1. Allyn & Bacon, Inc.
   470 Atlantic Avenue
   Boston, MA 02210

   Career Exploration & Preparation for the Special Needs Learner

   Riding Rainbows

   Shoptalk: Vocational Reading Skills Series

2. Anchor Press/Doubleday
   501 Franklin Avenue
   Garden City, NJ 11530

   Go Hire Yourself an Employer

3. Aspen Publications
   839 S. 250 West
   Orem, UT

   Employability Skills for the Special Needs Learner

4. Brookes Publishing Company
   P.O. Box 6099
   Bakersfield, CA 93386

   Competitive Employment - New Horizons for Severely Disabled Individuals

   Integration of Developmentally Disabled Individuals into the Community

   Pre-vocation & Vocation for the Special Needs Youth

5. Career Aids, Inc.
   8950 Lurline Avenue
   Dept. T.
   Chatsworth, CA 91311

   Career Exploration Kit

   Career Education Wall Charts

   Job Seeker Tips Poster

   The Job Hunting Game

Job Skills Series

Learning Work-Related Skills

Job Application Book Series

Attitudes on the Job: Life Skills Series Career Library

6. CEBCO Standard Publisher
9 Kulick Road
Fairfield, NJ 07006

Basic Skills Series

7. Changing Times Educational Services
300 York Avenue
St. Paul, MN 55101

Getting Ready to Work

8. The Children's Book Co.
P.O. Box 113
Mankato, MN 56001

A First Look at Careers

9. Chronicle Guidance Publications, Inc.
Aurora Street
Moravia, NY 13118

Chronicle Guidance Occupational Library

10. Consulting Psychologists Press
577 College Avenue
Palo Alto, CA 94306

The Career Planning Series

11. Cook Writer
Metro, WV

Occupational Notebook Program

12. Creative Teaching Press, Inc.
Monterey Park, CA 91754

Career Awareness Workbook

13. Curriculum Innovations, Inc.
3500 Western Avenue
Highland Park, IL 60035

Career World I and II

Career World Magazines

14. D & E Publishing Co.
22042 Rockport Lane
Huntington Beach, CA 92646

Corner Your Career

15. Developmental Learning Materials
7440 Natchez Avenue
Niles, IL 60648

Career Flip Book

This is Me

16. Dillon Press, Inc.
500 South Third Street
Minneapolis, MN 55415

Looking Forward to a Career

17. Educational Design, Inc.
47 W. 13th Street
New York, NY

Exploring Careers

18. Educational Research Council of America
Rockefeller Building
614 W. Superior
Cleveland, OH 44113

Real People at Work

19. Educational Research Marketing, Inc.
845 N. Broadway, Suite B
Santa Anna, CA 92701

The Comprehensive Career Education System

20. EMC Corporation
180 E. Sixth Street
St. Paul, MN 55101

Real People at Work Series

21. Ewing Publications
114 Main Street
Kingston, NJ 08525

New Opportunities for Deaf Children

22. Experience Education
401 Reed Street
Red Oak, IA 51566

Project Discovery

23. Eyegate House, Inc.
Jamaica, NY 11435

Eyegate Filmstrips, "Are You Looking Ahead?"

24. Fearon-Pitman Publishers, Inc.
6 Davis Drive
Belmont, CA 94002

Careers, Exploration & Decision

Teacher's Guide to Accompany Careers Exploration & Decision

Pacemaker Vocational Readers

The Job Box

Getting a Job

Job Tips

25. George Wright Ferguson
2000 W. Henderson Road
P.O. Box 20334
Columbus, OH 43220

Encyclopedia of Careers & Vocational Guidance

26. Finney Co.
3350 Gorham Avenue
Minneapolis, MN 55426

Occupational Guidance

Finding Your Job

27. Florida Dept. of Education
Division of Vocational Education
The CAPS Program
Center for Career Development Services
Florida Dept. of Education
Knott Building
Tallahassee, FL 23201

The Jungle Guide

28. Florida School for the
Deaf and Blind
P.O. Box 1209
Augustine, FL 32084

Career Education Activity Guide

29. Follett Publishing Co.
Educational Opportunities Division
1010 W. Washington Blvd.
Chicago, IL 60607

Coping Skills Series

Accent the World of Work Series

30. Russell Forwalt

Job Getting Guidance for Young People

31. Frank E. Richards Publishing Co., Inc.
P.O. Box 66
Phoenix, NY 13135

Unemployed Uglies

How to Write Yourself Up!

On the Job

Application Forms

Jobs from A to Z

Teenagers at Work

Looking into the Future

Stories About Workers

Rights and Duties of Citizens

Service Occupations

Getting Along Series of Skills Workbooks

Getting Ready for Pay Day

32. Gallaudet College Press
Division of Public Services
Gallaudet College
Washington, D.C. 20002

Career Awareness Learning Activities (KDES)

Independent Living Skills

On the Job

Money Management

Visual Vocabulary Skills Series

World Around You

33. Elk Grove Unified School District
8820 Elk Grove Blvd.
Elk Grove, CA

Unemployment is Non-Cents

34. Guidance Publishing Company
Guidance Assoc.
Communications Park
Publishing Group
P.O. Box 3000
Mount Kisco, NY 10549

You and Your Future

35. Hopewell Books, Inc.
1670 Sturbridge Drive
Road #1
Sewickley, PA 15143

Work Series

Money Series

36. Houghton Mifflin Co.
2 Park Street
Boston, MA 02107

Career Insights & Self Awareness Games

My Bread & Butterflies Career Books

Career Education Program

37. Interactive Media
15203 Brauham Lane
San Jose, CA

The Job Hunting Game

38. Interinstitutional Consortium for Career Education
3400 Portland Road, N.E.
Salem, OR 97303

Career Awareness/Exploration Curriculum Kit - Grades 4-8

39. Iowa School for the Deaf
1600 S. Highway 275
Council Bluffs, IA 51501

Career Education Curriculum Guide

40. James Book Publishers
2501 Industrial Parkway West
Haywood, CA 94545

Get Hired

Don't Get Fired

Janus Job Planner

Janus Job Interviewer Guide

Job Application Language

My Job Application File

People Working Today Series

Time Cards & Paychecks

Survival Vocabularies

Career Education Books

Survival Guides

41. King Features
235 East 45th Street
New York, NY 10017

Popeye Career Bingo

Popeye Career Comic Books

42. The Learning Process Center
5252 Balboa Avenue
San Diego, CA 92117

The Ungame

The Step Method of Career Education

43. The Learning Seed Company
Skokie, IL

Career Kit: Strategies for Decision Making

44. Love Publishing Company
1777 South Bellaire Street
Denver, CO 80222

Career Education for the Handicapped Child - the Elementary Classroom

45. Mafex Association Inc.
90 Cherry Street
Johnstown, PA 15902

Survival Sign Poster Programs

Employment Poster Series

Good Work Habits

I'm Going to Work

All About Jobs

Pete Saves the Day

46. Marion Education Service District
3180 Center, N.E.
Salem, OR 97301

Career Awareness/Exploration Curriculum Kit

47. Media Materials, Inc.
2936 Remington Avenue
Baltimore, MD 21211

Career Awareness

Career Exploration

48. McGraw-Hill Publications Co.
441 National Press Building
Washington, D.C. 20045

How to Use the Telephone

Your Job and Your Future, Book 1 and 2

A Career in the Modern Office

Lifeworks: You and the World of Work

49. McKnight Publishing Co.
P.O. Box 2854
Bloomington, IL 61701

Succeeding in the World of Work

AEL Career Decision Making Program

Life Adjustment Series

50. National Association of the Deaf
814 Thayer Avenue
Silver Spring, MD 20910

How to Get the Job You Really Want

51. National Center for Human Potential
2530 Crawford Avenue
Evanston, IL

Human Potential Seminar: A Positive Approach to Self-Development

52. New Readers Press
1320 Jamesville Avenue
Box 131
Syracuse, NY 13210

Practice in Survival Reading

Be Informed Series

53. Dutton Press - New York
2 Park Avenue
New York, NY 10016

Careers in Building Trade

Careers in Electronics

Careers in Journalism

Careers in Sports

Careers in Civil Service

Young Dancers Career Book

54. Northeast Regional Media Center for the Deaf
University of Massachusettes
Amherst, MA 01003

Career Education Transpa encies for Teaching Hearing Impaired Children

55. OK Books
OK Street, Inc.
12800 Hillcrest Road
Suite 215
Dallas, TX 75230

The Job You Want

56. Opportunities for Learning, Inc.
8950 Lurline Avenue
Chatsworth, CA 91311

Occupational Notebook Program

57. OUTREACH
Pre-College Programs
Box 114
Gallaudet College
Washington, D.C. 20002

Feelings: Keys to Values

Scope & Sequence for Career Education at KDES

Resource Guide for Career Education

Model for the KDES Career Education Program

Decisions! Decisions!

Shooting for Goals

Counseling

National Project on Career Education Products

Career Development Program: A Procedures Manual

A Guide to College/Career Programs for Deaf Students

People at Work

Getting a Job

I Can Book

Survival Skills: A Basic Skills Series

Time Out for Me

58. Parker Bros.
50 Dunham Rd.
Beverly, MA 01915

Careers (A Board Game)

59. Project CAP
Box 13
Greenland, AR 72737

Project CAP (Career Awareness Elementary Schools)

60. Prudential Press
Prudential Publishing Co.
P.O. Box 10751
South Lake Tahoe, CA 95731

Facing Facts About Preparing for Your Future

61. Psychoeducational Press

Values-Orientation in Schools

62. The Psychological Corporation
757 Third Avenue
New York, NY 10017

The Step Method: Learning & Practicing Thinking Skills

63. Quercus Corporation
2768 Pineride Road
Castro Valley, CA 94546

Paying With Cash

Paying With Promises

Getting that Job

64. Research for Better Schools, Inc.
444 North Third Street
Philadelphia, PA 19123

Deaf People Work in Many Science Jobs

65. Scholastic Book Service
50 West 44th Street
New York, NY 10036

Jobs in Your Future

Real Life Reading & Writing on the Job Unit

Real Life Math Skills Unit

Real Life Consumer Economic Unit

66. Science Research Associates, Inc.
259 East Erie Street
Chicago, IL 60611

My Own Thing

Job Experience Kits

Career Information Kit

A Survival Vocabulary Book A, B, C, & D

Junior Guidance Series Booklets

67. Singer Career Systems
80 Commerce Drive
Rochester, NY 14623

Job Survival Skills

68. Society for Visual Education, Inc.
1345 Diversey Pkway
Chicago, IL 60614

Foundations for Occupational Planning (filmstrips)

The Lollipop Dragon: World of Work

Job Survival Skills

69. Special Learning Corporation
42 Boston Post Road
Guilford, CT 06437

Career & Vocational Education for the Handicapped

70. Special Service Supply
Box 705
Huntington, NY 11743

Occupational Education Fact Finding Series - Parts I, II, III

71. Steck-Vaughn Co.
807 Branzos
P.O. Box 2028
Austin, TX 78768

Working with Others

How to Get a Job and Keep It

Where to Go, Who to See, What to Do

Being an Informed Citizen

72. Teaching Resources

It's Me - Building Self Concepts Through Art

73. Ten Speed Press
P.O. Box 7123
Berkeley, CA 94707

What Color is Your Parachute?

74. Tennessee Visual Education Service, Inc.
1001 Woodland Street
Nashville, TN 73206

The Paperwall (filmstrip)

Look Your Way to a Job (filmstrip)

The Bounty Hunter (filmstrip)

Numbers that Save the Lives (filmstrip)

How to Talk Yourself Into a Job (filmstrip)

The Wonder Worker (filmstrip)

The Invisible Paycheck (filmstrip)

The Role of Supervisors (filmstrip)

Job Attitudes (filmstrip)

75. Time Share H.M. Co.
Box 683
Hanover, NH 03755

Career Education Program

76. United Transparencies, Inc.
P.O. Box 688
Bingham, NY 13902

Succeeding at Work Series

77. U.S. Department of Labor
2000 Constitution Avenue, N.W.
Washington, D.C. 20402

Occupational Outlook Handbook

Dictionary of Occupational Titles

Merchandizing Your Job Talents

Jobs for Which you Can Qualify for if You Are a High School Graduate

How to Get and Hold the Right Job

78. Winston Press
430 Oak Grove
Minneapolis, MN 55403

Self-Esteem: A Classroom Affair

79. Xerox Corporation
245 Long Hill Road
Middletown, CT 06457

Career Pictures

80. Chronicle Guidance Publications, Inc.
Aurora Street
Moravia, NY 13118

Chronicle Guidance Program

81. Dormac, Inc.
P.O. Box 752
Beaverton, CA 97075

Curriculum Materials Useful for the Hearing Impaired

Basic Vocabulary Study Cards

82. Finney Company
3350 Gorham Avenue
Minneapolis, MN 55426

Occupational Guidance

83. Follett Publishing Company
1010 W. Washington Blvd.
Chicago, IL 60607

Career and Life Planning Guide

84. Gallaudet College
Division of Public Services
7th & Florida Avenue, N.E.
Washington, D.C. 20002

An Annotated Bibliography of Books & Materials for Adult Basic Education Classes with Deaf Adults

85. Hopewell Books, Inc.
1670 Sturbridge Dr.
Road #1
Sweickley, PA 15143

How I Should Act at Work

86. Houghton Mifflin Company
2 Park Street
Boston, MA 02107

Career Exploration and Planning

Career Planning: Freedom to Choose (SCID)

87. Janus Book Publishers
2501 Industrial Parkway
Haywood, CA 94545

Interview Guide

Get Hired! 13 Ways to Get a Job

My Job Application File

Don't Get Fired! 13 Ways to Hold Your Job

Using the Want Ads

Survival Vocabulary Series

Job Planner

88. Lakeshore Curriculum Materials
1144 Montague Avenue
San Leandro, CA 94577

Life Skills: Essential Curriculum Materials for Secondary Students

89. McKnight Publishing Company
P.O. Box 2854
Bloomington, IL 61701

Career Decision Making Program

Career Information System

Career Information System Guide

90. New Readers Press
Box 131
Syracuse, NY 13210

Work Rules

Where to Get Help

Getting to Work

Job Training Centers

How to Find a Job

How I Should Act at Work

Be Informed Series

Occupations, 1 and 2

The World of Work

91. Prentice-Hall, Inc.
Route 9W.
Englewood Cliffs, NJ

Careers: Exploration and Decision

92. Singer Education Division
Education Systems
3750 Monroe Avenue
Rochester, NY 14603

Job Survival Skills

93. TSC (Time Share Co.)
A Houghton-Mifflin Co.
Box 683
Hanover, NH 03755

Guidance Information System

Career Planning: Freedom to Choose

Job Lab 2

Job Lab 3

94. U.S. Dept. of Labor
2000 Constitution Avenue, N.W.
Washington, D.C. 20402

Dictionary of Occupational Titles

Occupational Outlook Handbook

References

Updegraff, D., & Egelston-Dodd, J. (1982). The national project on career education: Past, present, and future. Directions: Gallaudet College, 2(4), 15-23.